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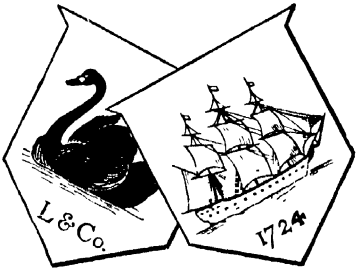

REVISED EDITION

LONGMANS, GREEN, AND CO.
8 HORNBY ROAD, BOMBAY
303 BOWBAZAR STREET, CALCUTTA
LONDON AND NEW YORK
1909

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PREFACE

THIS book has been prepared with a special view to the requirements of candidates for the Matriculation Examination of the various Indian Universities, all the most recent syllabuses issued by those bodies having been consulted to render the work as complete as possible. The matter included is sufficient for the students in the Middle and High Departments of Anglo-Vernacular Schools, and for those of the upper classes of European Schools.

The first portion is devoted to what is usually known as Physical Geography, the order adopted in this section being that approved by the best and modern authorities.

In General Geography Asia is taken first, and in the detailed Geography of that continent the Indian Empire is fully treated in a section covering 94 pages. The whole Empire is first treated regionally; the physical features, climate, productions, and people of the Himalayan region, the great river-plain, the Deccan and Burma, being dealt with separately and exhaustively. The provinces are then taken up one by one, special attention being paid to the commercial development of each.

The continents of Europe, Africa, North and South America, and Australia are then taken up in that order, and the countries of each are treated fully.

Regional geography receives attention throughout the book, and historical geography is also included wherever it comes within the scope of the pupils for whom the book is intended. Cause and effect have been connected all through, and political and commercial features have been associated with physical wherever possible.

An effort has been made to see that the book is not overcrowded either with facts or names, and place-names and facts have been associated throughout, so as to awaken interest and aid the memory.

All figures have been brought absolutely up to date, the latest census and trade returns having been consulted for statistics as to population and commerce.

A characteristic feature of the book is the maps. A complete series of photo-relief, orographical and political maps has been inserted, in which will be found all the names mentioned in the text.

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ASIA

GENERAL DESCRIPTION.—Although usually spoken of as a separate continent, Asia is continuous with Europe, forming the eastern, and larger, portion of the great land-mass known as Eurasia. It is the largest of all the continents, having an area of over 17 million sq. miles, or about one-third of the land surface of the Earth; it has also the largest number of inhabitants, its population being about 830 millions.

The vast portion of the human race that inhabits Asia is very unequally distributed over the continent. The rich river valleys of China Proper and India are densely peopled, while the whole of Siberia, which occupies nearly half the entire continent, has only about as many inhabitants as Mysore State. This scarcity of population in the central and northern parts is mainly due to the **deficiency of the rainfall** of the central plateaux, and the **extreme cold** of the northern plains.

(Asia contains the highest mountains (the Himalaya), the most remarkable depression (the Valley of the Jordan), the most extensive elevated plateau (Tibet), the largest lake (the Caspian Sea), and the most populous countries (China and India) of the globe. It is the original home of the Aryan race, and of the five great religions, the Jewish, the Christian, the Muhammadan, the Hindu, and the Buddhist.)

BOUNDARIES.—On the **north**, Asia is bounded by the **Arctic Ocean.**

On the **east** by the **Pacific Ocean.**

On the **south** by the **Indian Ocean.**

On the **west** by the **Red Sea**, the **Mediterranean Sea**, the **Black Sea**, the **Caucasus Mountains**, the **Caspian Sea**, the **Ural River**, and the **Ural Mountains.**

The natural boundary between Asia and Europe is not very clearly defined; the Ural Mountains rise so gradually on the European side that they hardly break the continuity of the vast plain stretching from the Atlantic to the Behring Sea.

COAST-LINE.—Asia is, speaking generally, a compact land-mass, and the coast is marked rather by broad bays and seas than by deeply-cut gulfs and smaller inlets. The north coast is the shortest and least indented, and being ice-bound for nearly the whole year, is practically useless for commercial purposes. The east coast is remarkable for its almost continuous chain of islands, and its series of landlocked seas. On the south coast are the three large peninsulas—Arabia, India, and the Malay Peninsula.

SEAS AND ISLANDS.—On the north, the **Kara Sea** and the **Gulf of Ob** are the principal openings. The **Liakof Islands**, off the mouth of the Lena, have long been noted for the quantity of fossil ivory found there.

On the **east** coast—1. The **Behring Sea** is bounded seawards by the **Aleutian Islands**, and on the south by the **peninsula of Kamchatka.**

2. The **Sea of Okhotsk** is enclosed by the **Kurile Islands,** and separated from the Japan Sea by the large island of **Sakhalin.**

3. The **Japan Sea** lies between **Sakhalin** and the **peninsula of Korea**, and is protected seawards by the **Japan Islands.**

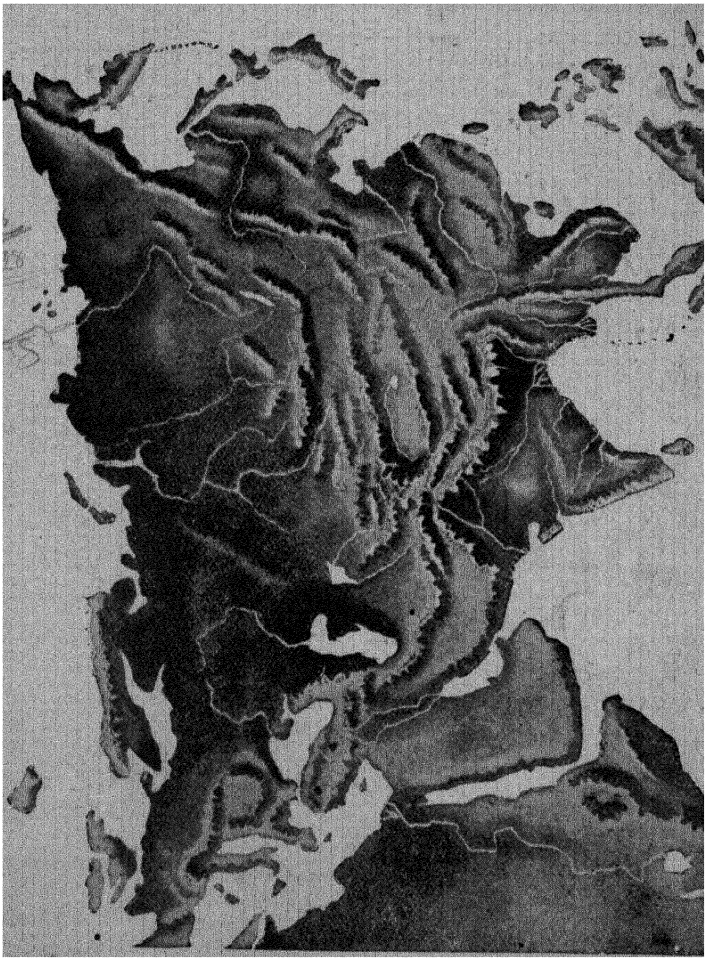
4. The **Yellow Sea** and the **East China Sea** together form the next opening, which is enclosed by the **Riu-kiu (Lu-chu) Islands** and **Formosa.** The **Yellow Sea** is almost cut into two parts by the **peninsulas of Shantung** and **Liau-tung**, the latter of which terminates in the now celebrated **Port Arthur.**

5. The **South China Sea** is very large, and is enclosed by the **Philippine Islands** and **Borneo.** Its chief arms are the **Gulf of Tongking**, protected by the island of **Hainan**, and the **Gulf of Siam.**

On the **south** there are two great openings:—1. The **Bay of Bengal**, with the **Andaman Islands, Nicobar Islands,** and **Ceylon.** 2. The **Arabian Sea,** with its two large branches, the **Persian Gulf** and the **Red Sea.** Off the south-west coast of India are the **Maldive** and **Laccadive Islands.**

On the **west** lie the **Levant,** with the island of **Cyprus,** the **Sea of Marmora,** and the **Black Sea.**

STRAITS.—Behring Strait, leading from the Arctic Ocean to Behring Sea; **Korea Strait**, connecting the Sea of Japan with



the Yellow Sea; **Formosa Strait**, leading from the Yellow Sea to the China Sea; the **Strait of Malacca**, connecting the China

RELIEF.—The surface of Asia consists mainly of (1) a series of **lofty plateaux**, stretching from east to west and occupying the central, and a large portion of the southern part of the continent;

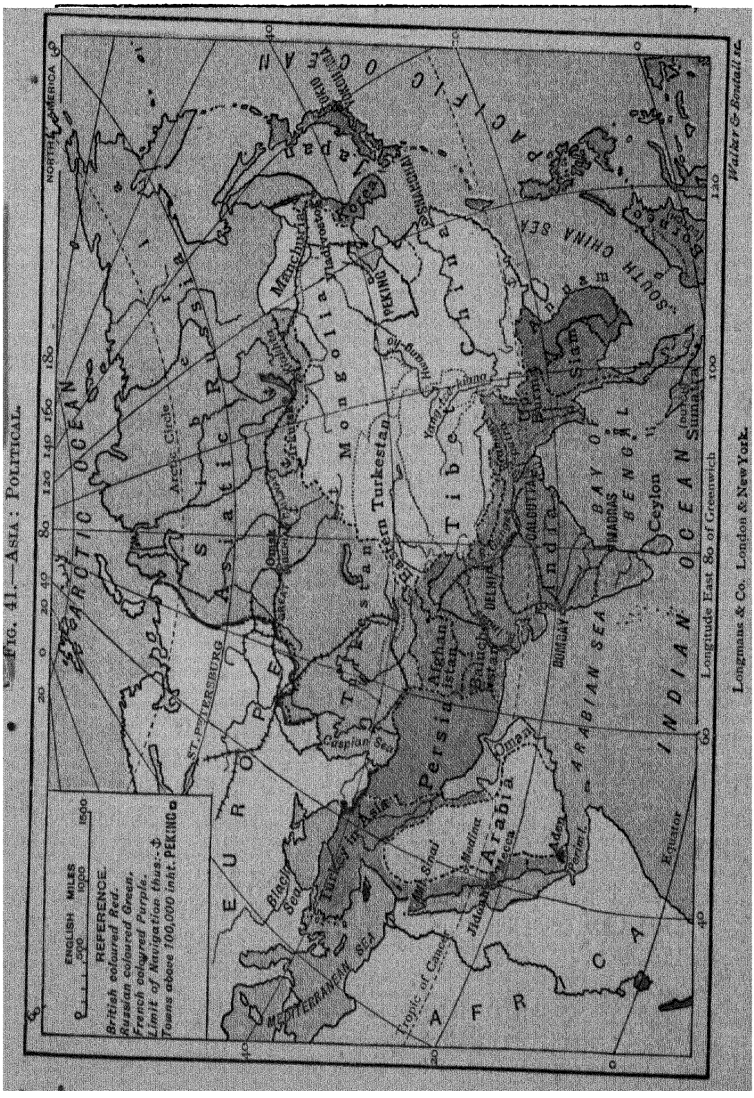


FIG. 41.—ASIA: POLITICAL.

(2) a **great plain** extending from the northern edge of the plateaux to the Arctic Ocean; (3) **smaller plains**, sloping to the sea on the south and south-west; (4) the **southern tablelands** of Arabia and the Deccan.

CENTRAL PLATEAUX.—1. The chief centre of elevation is the extensive **Plateau of Tibet**, lying to the north of the Himalayas at an elevation of about 15,000 ft. This arid region has a severe climate, a scanty vegetation, and is thinly peopled. From it a series of plateaux decreasing in altitude extends to Behring Strait on the east, and to the Mediterranean Sea on the west.

2. North-east of Tibet, and separated from it by a slight depression, the Han-Hai, or Dry Sea of the Chinese, lies the vast **Plateau of Mongolia.** From this plateau elevated land extends to Behring Strait.

3. On the western side of Tibet the lofty **Plateau of Pamir** forms the starting-point of the great mountain chains of Asia.

4. The **Plateau of Irania** lies between the Caspian Sea and the Persian Gulf, and is continued to the west by the tablelands of Armenia and Asia Minor.

SOUTHERN TABLELANDS.—1. The **Plateau of Arabia** occupies the greater portion of the peninsula of that name.

2. The **Deccan** occupies most of peninsular India.

MOUNTAINS.—The plateaux are bordered and crossed by high ranges of mountains. From the Pamir Plateau five great ranges proceed in various directions.

1. The **Himalayas** extend to the **south-east** for 1,500 miles, separating India from Tibet. They contain the most elevated peaks in the world, Mount Everest, the loftiest, being 29,000 ft. high.

2. The **Kuen-lun Mountains** extend **eastwards** along the northern border of Tibet.

3. The **Tian-shan Mountains** extend to the **north-east**, and, with the **Altai Mountains** and other ranges, form a continuous chain stretching to Behring Strait.

4. The **Hindu Kush Mountains** extend to the **west**, and form the beginning of a ridge which skirts the north of the Plateau of Irania, and terminates on the shores of the Mediterranean Sea.

5. The **Sulaiman Mountains** extend **southwards** along the border of India.

LOWLANDS.—From the northern border of the great cen-

tral plateau the **Plain of Siberia** stretches to the Arctic Ocean. This vast area contains extensive forests in the south, sandy steppes in the south-west, and frozen marshes or tundras in the north.

On the south and south-west, where the great rivers enter the sea, and where the monsoon winds bring copious rains, are several smaller but very fertile plains, for the most part thickly peopled. The principal of these are the **Plain of China**, stretching inland from the shores of the Yellow Sea, and the **Plain of Northern India**, which includes the valleys of the Ganges and Indus.

Among the **less important plains** are the districts lying around the Persian Gulf, and the Gulfs of Martaban, Siam, and Tongking.

RIVERS AND LAKES.—The rivers of Asia fall into two great classes—(1) those which reach the open sea, which may be called **Oceanic rivers**, and (2) those with no visible outlet to the ocean, which may be termed **Continental rivers.** The former flow outwards from the mountainous regions of the interior, while the latter are either prevented by mountain ridges from leaving the plateaux, as in the case of the Tarim, or flow below the level of the sea, as in the case of the Jordan.

1. The great rivers of **South-eastern Asia** chiefly rise in the mountains bordering the Plateau of Tibet. The principal are:—The **Hwang-ho** and **Yang-tse-kiang**, flowing into the Yellow Sea; the **Si-kiang**, **Song-ka**, and **Me-kong**, flowing into the China Sea; the **Irawadi**, **Brahmaputra**, and **Ganges**, flowing into the Bay of Bengal; and the **Indus**, flowing into the Arabian Sea.

2. The great rivers of the **Northern Plain** rise in the mountains bordering the Mongolian Plateau. The principal are:—The **Ob**, **Yenisei**, and **Lena**, flowing into the Arctic Ocean; and the **Amur**, flowing into the Sea of Okhotsk.

3. The **Euphrates** and **Tigris** rise in the Plateau of Armenia, and flow into the Persian Gulf.

Of the continental rivers the chief are the **Ural**, flowing into the Caspian Sea; the **Sir** and **Amu**, flowing into the Sea of Aral; the **Ili**, into Lake Balkhash; the **Helmand**, into Lake Hamun; the **Tarim**, into Lob Nor; and the **Jordan**, into the Dead Sea.

Asia is noted for the size and number of its **salt-water lakes.**

The **Caspian Sea**, with an area nearly seven times that of the island of Ceylon, the **Sea of Aral**, and **Lake Balkhash**, in Asiatic Russia, with **Lakes Van** and **Urumia**, in Armenia, are the most important.

The only **fresh-water lake** of any magnitude is **Lake Baikal**, which is drained by the Yenisei, and is said to be the deepest lake in the world.

CLIMATES AND RAINFALL.—The chief causes which influence the climate of Asia are :—

1. The elevation of the interior, which makes a great portion of the continent colder than it would otherwise be.

2. The general direction of the mountain chains from east to west, which prevents the passage of the cold north winds southwards and the warm south winds northwards.

3. The monsoon winds, which account for the rainfall of India and south-eastern Asia.

4. The slope of the land from the interior towards the Arctic Ocean, which renders the greater part of Siberia cold and unproductive.

5. The fact that Asia is situated to the east of Africa and Europe, which accounts for the dryness of much of the western portion of the continent.

Asia may be divided into three great climatic regions :—

1. The **South-eastern** or **Monsoon Region**, stretching from the Indus to Japan. Here the average annual temperature is always high (from 70° to 80° F.), the mountains shutting off the cold blasts from the elevated central plateaux. Except in parts remote from the sea, extremes of temperature are unknown.

2. The **Region of the Plateaux**, extending from the Mediterranean to the Pacific. Here the temperature is generally low on account of the elevation. The rainfall is deficient :—1. On account of the mountains shutting off the rain-bearing winds from the Indian Ocean. 2. Because the winds blowing across Africa are dry winds, and thus bring no moisture to South-western Asia.

3. The **Northern Region**, which is too cold to be productive. For nine months the cold is extreme. At Yakutsk, in Eastern Siberia, there is a difference of more than 100° F. between the summer and the winter temperatures.

4. In accounting for the **rainfall** it must be remembered that Asia is the largest land area in the world, and that it lies entirely within the Northern Hemisphere. During the summer months, therefore, when the sun is

shining over Asia, its surface becomes heated, sea breezes are drawn in from the Indian and Pacific Oceans (the monsoons), and rain is experienced over the south-east and east of the continent. In the north and west, owing to the nature of the boundaries, the rainfall, even in summer, is uncertain. In winter, when the sun is shining over the Southern Hemisphere, a land breeze is drawn southwards, and the rainfall is generally deficient over nearly the whole of the continent. The rainfall of Asia may therefore be described as either **deficient** or **uncertain**.

Deserts.—In the vicinity of the tropics of Cancer and Capricorn, rainfall is generally deficient, and two belts of deserts encircle the globe along these latitudes. A remarkable exception to this general rule is the monsoon region of south-east Asia.

1. The desert belt of the northern tropic stretches across **Arabia**, a part of **Persia**, **Baluchistan**, and **Sindh**, as far as the **Thar Desert** of India.

2. The **Desert of Gobi** owes its rainless character to the prevailing winds being deprived of moisture by the lofty mountains by which it is surrounded.

3. The **Desert of Turkestan** occupies the low-lying region between the Caspian Sea and the Central Plateau, and is cut off on all sides from rainbearing winds.

Irrigation.—The uncertainty of the rainfall in Asia accounts for the irrigation works which have to be resorted to in nearly all parts of the continent. In no other part of the world, except perhaps in Australia, is the need for irrigation more keenly felt than in Asia. Remains of ancient systems of irrigation are to be seen in various parts, particularly in Mesopotamia and Siam, where the Euphrates and Tigris, and the Me-kong supplied the water for numerous canals.

From east to west irrigation is still practised. In the hilly regions of Japan and China and on the mountains of India **terraced cultivation** is carried on, the tiny hill-streams being conducted along channels, often for very long distances. Most of the rivers of India, and particularly the Indus, provide water for what is perhaps the greatest system of **canals** in the world. The continental rivers of Turkestan are also utilised in the same way. In Persia and Baluchistan an ingenious method of irrigation is employed. The water is conducted along underground tunnels, called **karezes**, into which openings are made at intervals for the removal of the water. **Wells** and **tanks** are used in most parts of the continent.

Vegetation.—The relation between vegetation and climate is well illustrated in Asia.

1. The **South-eastern** or **Monsoon Region**, with a tropical heat and abundant moisture, has the most varied vegetation. The mountains are covered with the most valuable **timber trees**, and on the plains **rice**, **cotton**, **sugar-cane**, and other products are cultivated, while the **bamboo**, **palms**, and **ornamental woods** flourish.

The **East Indian Islands** furnish almost the whole of the world's supply of **spices.** They lie in the belt of **tropical forests.**

In **South-western Asia** only such products as can thrive with a limited supply of water are abundant. Such are the **date-palm** and **gum-yielding plants.**

2. The **Central Plateaux** are clothed with **grasses**, and, except on the higher mountain slopes, are singularly deficient in trees.

3. The **Northern Region** has two distinct belts: (1) the **tundras**, bordering on the Arctic Ocean, on which grow **mosses, lichens**, and **stunted shrubs**, and (2) the region of **pine forests** farther south.

Animals.—As Asia extends from the Equator to the Arctic Circle, it exhibits a great variety of animals.

1. The **South-eastern Region** is the home of the **elephant, rhinoceros, lion, tiger, panther,** and **jackal**, of **numerous reptiles**, and **gorgeously plumaged birds.**

South-western Asia is famous for its fine breed of **horses**, and the **ostrich** is found in Arabia. In this region the **camel** is employed for purposes of transport.

2. On the **plateaux** of the interior, **ruminating animals**, such as the **camel, ox, deer, goat, sheep**, &c., are chiefly found; the **yak** is used as a beast of burden.

3. In the **Northern Region** the forests furnish shelter for numerous wild animals, which are hunted for the sake of their **furs. Bears, foxes, sables,** and **martens** are among the most common. The **reindeer** is almost the sole support of the inhabitants of the Far North.

PEOPLE.—The line of mountains stretching from the Himálayas to the Caspian Sea broadly divides the **two great types** which people Asia. North of this line live the **Mongolian** or **yellow** type, of whom the Chinese are the most numerous group; while south of it the people are of the **Caucasian** or **white** type, varying in complexion from white in Caucasia to brown in India.

Religions.—The three great religions of Asia are **Brahmanism, Buddhism,** and **Muhammadanism.**

1. **Brahmanism** (or Hinduism) is confined to India.

2. **Buddhism,** which originated in India, now prevails in the Chinese Empire, Japan, Indo-China, Burma, and Ceylon. The great Lamas (Buddhist priests) live in Tibet.

3. **Muhammadanism** had its origin in Arabia, and spread north, west, and east. It is the religion of South-west Asia, and has many adherents in India, the north of China, and the Malay Archipelago.

The majority of the Chinese observe ancestor-worship, a debased form of the religion of **Confucius.**

Political Divisions.—Nearly three-quarters of the surface of Asia is occupied by the three great empires—the **Russian,** the **Chinese,** and the **Indian.** These 'three empires meet' on the plateau to the north-west of India.

The island empire of **Japan** in the Far East has justified its inclusion among the Great Powers of the world.

In the Indo-Chinese peninsula, **Siam,** an independent state, lies between **French territory** on the east, and **British** on the west.

The **East Indian Islands** are largely in the hands of the **Dutch.** The **Philippine Islands** belong to the **United States of America.**

In the west of Asia, **Turkish** territory is continuous with the Sultan's dominions in Europe. The Muhammadan states of **Persia** and **Afghanistan** and a large part of **Arabia** are independent.

On the whole, foreign influence may be said to have penetrated less into Asia than into any other continent except Europe.

EXAMINATION PAPERS

A. 1. Give the area and population of Asia. Where is the population densest, and why is it so?
2. Mention the principal plateaux of Asia, with their situation.
3. Why is the surface of the plateaux largely composed of deserts? Give the names and situation of the more extensive wastes.
4. Give the location of the principal water-parting of Asia.

B. 1. Name the five main mountain ranges which radiate from the Pamir.
2. What lowland plains are situated in Southern Asia?
3. Mention the islands of Eastern Asia, and say what seas they enclose.
4. What straits and seas would a vessel pass through in a journey from the Sea of Okhotsk to the Bay of Bengal?

C. 1. Where are the Tundras, Han-hai, Hainan, Tian-shan Mountains, Plateau of Iran, Cape Lopatka, and the Maldive Islands?
2. What causes South-eastern Asia to be so productive? Mention some of the principal products.
3. What are the characteristic features of the three main climatic regions of Asia?
4. Give the chief rivers rising in the plateau of Tibet and state into what seas they flow.

D. 1. Mention the situation of the principal lakes of Asia, and say what rivers flow into or out of them.

2. Compare the countries separated by the Himalayas as regards their inhabitants and climate.

3. Compare the rainfall of South-eastern and South-western Asia, and account for the difference.

4. What foreign Powers have possessions in Asia, and where are their territories situated?

THE INDIAN EMPIRE

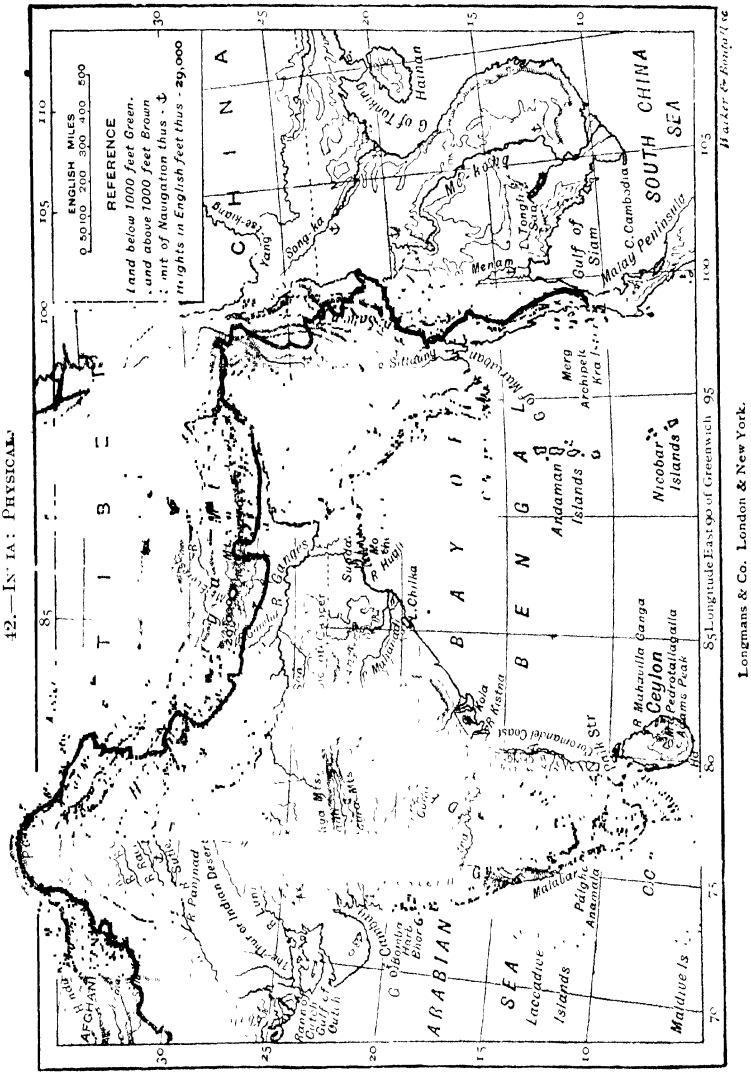
India has been called 'the fairest jewel in the British Crown,' and in many ways the metaphor is an apt one. Her natural advantages are numerous: she is compact and self-contained; her frontiers are natural barriers; the climate is milder than that of most other countries in the same latitude; the soil is, on the whole, wonderfully fertile; and the productions are abundant and of great variety. In point of population the Indian Empire is the second country in the world. More than a quarter of the world's inhabitants belong to the British Empire, and of these three-quarters are in India; moreover, the people of India are probably the most advanced of all the races who inhabit the Tropics.

When Great Britain first obtained sway in India the country was torn with internal strife. Little by little, harmony has taken the place of discord; the people have settled down to habits of industry and self-improvement; agriculture is making progress; education, arts and industries are making rapid headway; a network of railways covers the country; canals are being constructed; forests are preserved; and India is fast taking her place amongst the commercial nations of the world.

The Indian Empire of to-day is the result of gradual growth. From a collection of separate kingdoms, in which unity was practically unknown, has developed a single empire, under one central authority, of which the parts are bound together by national ties.

POSITION AND SIZE.—The Indian Empire occupies a position of great advantage, almost at the centre of the Eastern Hemi-

sphere, and at the head of the Indian Ocean, so that her trade routes radiate in all directions—westwards for Europe and the



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British Isles; south-west for South Africa; south for Ceylon; and south-east for Australia and the Far East.

It occupies the whole of the central triangular peninsula on the south coast of Asia, and a considerable portion of the eastern peninsula. It stretches inland as far as the great Himalayan ridge on the north, Persia on the west, and to within 300 miles of the Pacific coast on the east. It thus extends over **40 degrees of longitude** and **30 degrees of latitude**, or **2,000 miles** from north to south, and **2,500 miles** from east to west. In area it is about **1,800,000 sq. miles**, or nearly one-sixth of the whole British Empire.

BOUNDARIES.—The Indian Empire is remarkable for its **natural boundaries.** The land boundary consists of lofty mountain chains, highest along the north, where the **Himalaya Mountains** have proved an effectual dividing line between the Mongolian and Aryan races. On the east the **Assam and Burmese Mountains** have not prevented the Mongolian from finding his way into Burma, and the passes of the **Hindu Kush, Sulaiman, and Khirthar** ranges of the north-west have been the routes of many invading armies in past ages.

The name of the country—**India**—was probably given to it by these invaders. The first great check they encountered in their march was the river **Indus** or **Sind** (Sanskrit *sindhu* = a river or flood). This name, of which the Greek form is India, and the Persian is Hindu, came thus to be applied to the country beyond (**Hindustan** or **India**) and to the people inhabiting it (**Hindus**).

The **desert plateau** to the west of Baluchistan completes the natural land boundaries of the Empire.

The sea boundaries are the **Bay of Bengal** on the east, and the **Arabian Sea** on the west. The small number of good harbours on both these coasts renders them as safe boundaries as the mountainous land boundaries. The land and sea boundaries are about equal in length.

COAST-LINE.—The chief characteristic of the coast-line of India is its lack of indentations, and although about 5,000 miles in length, it has only four openings of importance into the land. These are the **Rann of Cutch** and the **Gulf of Cambay** on the west, the **Gulf of Manaar** between India and Ceylon, and the **Gulf of Martaban** in Lower Burma. It is also remarkable that

only one of these, the last named, is useful for commercial purposes. The Rann of Cutch is so shallow that it is not always entirely covered with water. There is no good harbour on the Gulf of Cambay, the former trade of Surat having been transferred to Bombay. The Gulf of Manaar is very shallow at its northern end, where Adam's Bridge is becoming more and more a connecting link between Ceylon and the mainland. The port of Rangoon is approached by the Gulf of Martaban.

The west coast of India differs considerably from the east; the former, or **Malabar coast**, is more rocky and the coast strip between the mountains and the sea is narrow. The shore also shelves down more steeply, and consequently there are a few good harbours, particularly those of **Bombay**, **Goa**, and **Cochin**. The harbour of **Karachi** has to be protected by a breakwater. The eastern or **Coromandel coast** is low, and a much wider plain, known in the south as the **Carnatic**, lies between the sea and the Eastern Ghats. The beach generally slopes down very gradually, and the coasts are therefore very much surf-beaten. The only important harbour on this coast—**Madras**—has been constructed at enormous expense.

The coasts of India are singularly free from islands, **Ceylon** and a few islets at its northern extremity being the chief. The coast of Burma, on the other hand, is broken by small islets, the **Mergui Archipelago** being at the extreme south. The **Laccadive** and **Maldive Islands** are groups of **coral atolls** lying well away from the coast of India in the Arabian Sea, and the **Andaman** and **Nicobar Islands** in the Bay of Bengal form part of a submarine ridge which sweeps from Cape Negrais to the East Indian Islands.

Geological History.—In very remote ages India presented a very different appearance from what it bears now. Geologically, the Deccan is the oldest part of the country, and when the regions occupied by the Himalayas, the great plain, and parts of Burma were a vast marine bed, the Aravalli Hills and the Vindhya Mountains occupied their present position and the Deccan was a low plain. In those very early ages this region was but slightly connected, through Bengal and Assam, with the Asiatic continent; but, on the other hand, there is abundant evidence to show that a continental connection with South Africa existed, the only

ing traces of which are the Seychelles Islands and Madagascar. The Arabian Sea was then a great inland sea stretching as far as Tibet and Assam.

The first important change to occur was the uplifting of the

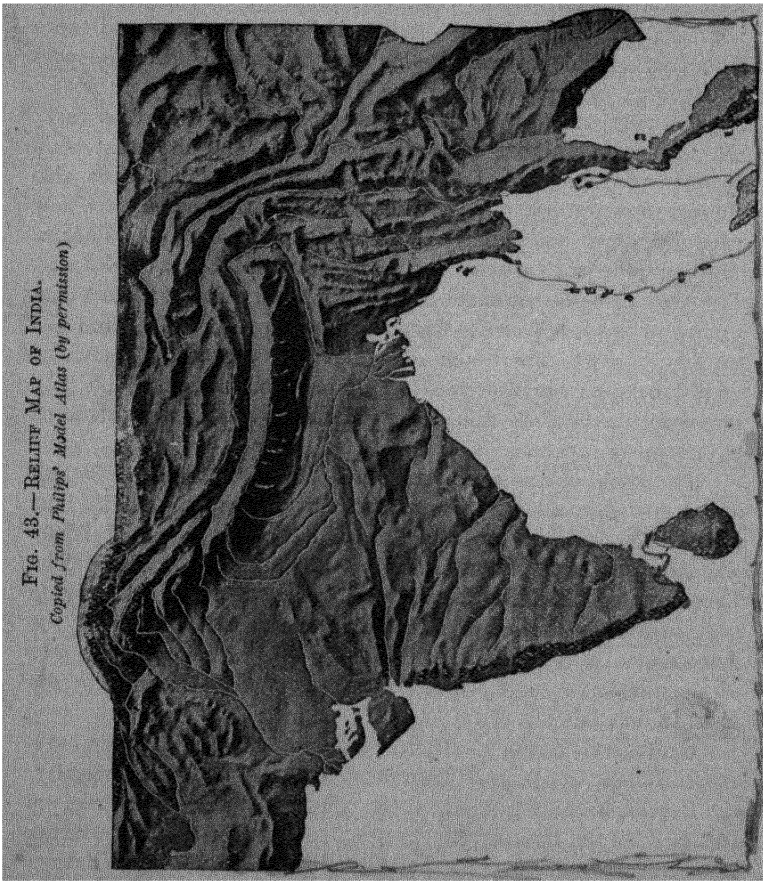

FIG. 43.—RELIEF MAP OF INDIA.
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Deccan plateau by volcanic agency, then the shrinkage of the Earth's crust caused the Himalayas to be folded up, and finally the great plain of Northern India began to emerge above the sea. But while India was becoming more and more a part of Asia, the Indo-African continent was gradually subsiding, and eventually

the two sections of the Indian Ocean rolled into one, a submarine plateau marking the locality of what had formerly been a continent of no mean dimensions.

RELIEF.—The surface of the Indian Empire is divided naturally into four well-defined parts :—(1) the **mountain region** of the north ; (2) the great **river-plain** of the Indus, Ganges, and Brahmaputra ; (3) the **plateau of the Deccan** ; and (4) **Burma.** Each of these regions has its own physical characteristics.

1. THE MOUNTAIN REGION OF NORTH INDIA

MOUNTAIN RANGES.—The great mountain system of the north of India springs from the **Plateau of Pamir** to the north-west of Kashmir.

1. To the south-west run the **Hindu Kush Mountains,** which are continued in the **Sulaiman Range** and the **Khirthar Mountains.** The average height of these ranges is barely 6,000 ft., but **Takht-i-Sulaiman,** the highest peak, is about 11,500 ft. in height. Several passes cross these ranges, and are important trade-routes across the frontier. The chief are the **Khaibar** (3,400 ft. at its highest point), which accounts for the existence of the town of **Peshawar** ; the **Gumal,** which is the route from **Dera Ismail Khan** ; and the **Bolan** (5,800 ft. at the highest point), leading from Persia, through **Quetta** to **Shikarpur** in Sind.

The northern end of this chain receives a good supply of rain, and its valleys are well watered and fertile, but south of Takht-i-Sulaiman it enters the rainless belt, and from here to the sea the mountains are barren and rocky, incapable of supporting life of any kind beyond a few stunted shrubs.

These facts account for the habits of the tribesmen along these ranges. In the northern section the people live in villages and follow an agricultural life, producing grain and fruit, which flourish in the temperate climate. In the southern section wandering tribes eke out an existence,—on the oases of the plateau in the summer, when the temperature, owing to the elevation, is moderate ; and in the winter, when the dryness of the atmosphere in Baluchistan causes severe frosts, they migrate to the plains of Sind. As many as 60,000 camels have thus passed in a few days at the end of the summer through the Bolan Pass alone.

2. To the south-east runs the great mountain belt of the **Himalayas** ('the abode of snow'—Sanskrit, *hima*, frost; *alai*, a house). The main system consists of two parallel ranges which sweep in a curve, 1,500 miles in length, along the entire northern boundary of India. Kashmir State is practically covered with mountains, but along its northern boundary runs the **Karakorum Range**—short but lofty. The average height of the system is probably over 18,000 ft. The loftiest parts of the range are in Nepal, where **Mount Everest** (Gaurisankar), the highest peak in the world, reaches 29,000 ft., **Kanchinjinga** 28,200 ft., and **Dhaulagiri** is over 26,800 ft. in height. At its western end, the highest peaks are over 25,000 ft. in height; **Nanga Parbat** is 26,600 ft. high, and **Nanda Devi**, further east, a thousand feet less. The Karakorum Mountains are not less lofty, the highest mountain, and the second in the world, being **Mount Godwin Austen** (28,250 ft.).

South of the Himalayas and at no great distance is the low **Siwaliks Range**, separated by a long valley known as the **Dun** in the west and as the **Mari** in Nepal.

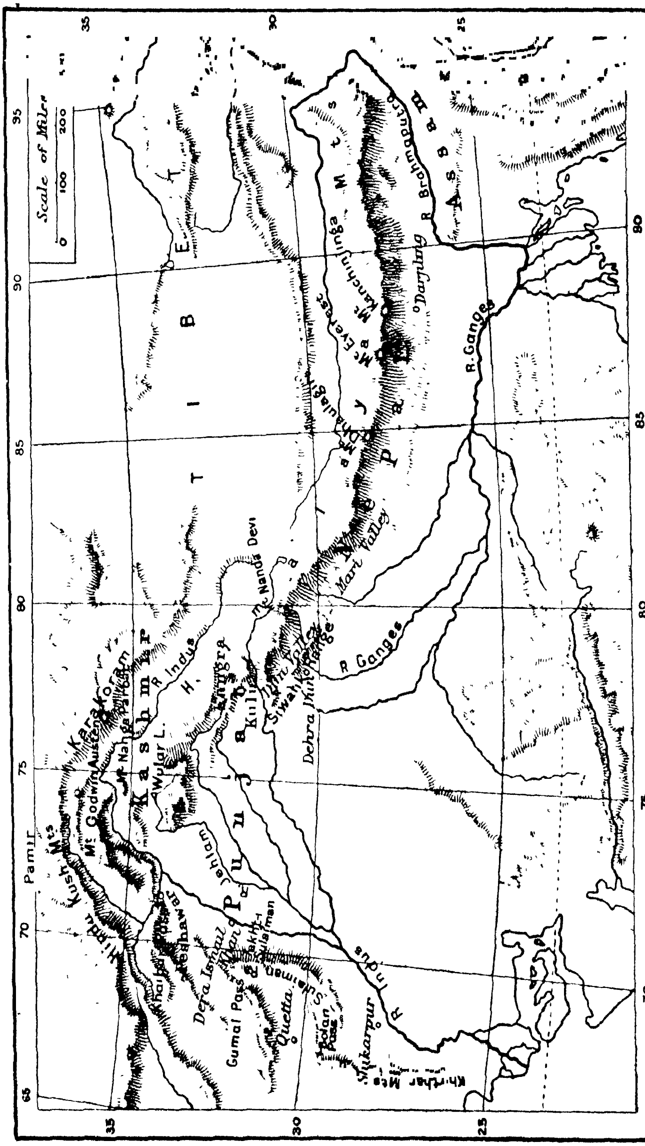
DRAINAGE.—The Himalaya Mountains drain into the great rivers of Northern India—the **Indus**, the **Ganges**, and the **Brahmaputra**. An enormous number of mountain streams and torrents combine to form the rivers which eventually debouch on to the plains, indeed it is to these hill streams that the great Indo-Gangetic Plain owes much of its productiveness, for they bring down water from the snows and silt from the mountain sides. Most of these rivers rise in glaciers and carve their way through the mountains in deep gorges.

The only lake of importance is **Wulur** in Kashmir, formed by the widening of the channel of the river Jehlam.

CLIMATE AND RAINFALL.—In ascending the Himalaya Mountains the same ranges of temperature are experienced as in proceeding from the Equator to the Pole, the **snow-line** being reached on the southern slopes at a height of **15,000 or 16,000 ft.** The snow-line on the northern slopes is, strangely, **4,000 ft. higher,** owing to (1) the **greater dryness** of the interior, (2) the **smaller snowfall,** and (3) the consequent **increase of evaporation** which goes on.

The mountains form a great barrier to the rain-bearing winds

Fig. 44.—Detailed Map of Physical Features of Northern India.



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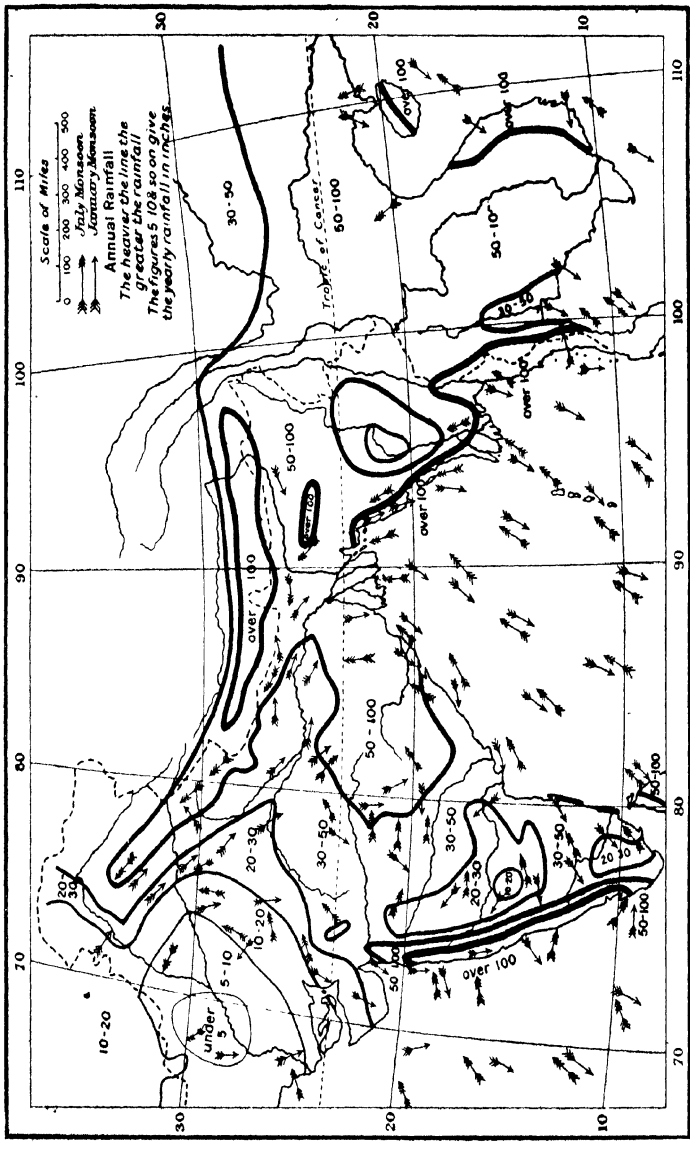

FIG. 45.—RAINFALL MAP.

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from the south, which, when they reach the inner ranges, have been deprived of nearly all their moisture. The winds which strike the western end of the range are less moist than those further east, and the rainfall therefore increases from west to east, from an average of **30 inches** in a year in the **upper basin of the Indus** to **120 inches** at **Darjiling**, and over **500 inches** in **Assam**. Similarly the quantity of rain decreases towards the interior of the system, for reasons already given.

The local winds in this region blow with great regularity, from the plains towards the interior during the day, and in the opposite direction during the night.

VEGETATION.—The vegetation varies with the climate, from tropical species on the lower slopes to mosses near the snow-line. Although abundant along the whole Himalaya range, the vegetation of the more humid regions to the east is more luxuriant than in the west, where the climate is drier. Large areas of **forest** are preserved by Government and afford valuable supplies of timber. Near the plains **bamboos**, **tree-ferns**, **palms**, and many tropical timber trees are found. Above these is the zone of hard-wooded timber trees, and at a still higher elevation cone-bearing trees are met with, such as the **pine**, **fir**, **larch**, and **yew**. The most valuable timbers produced are **deodar**, **sal**, and **tún**.

CULTIVATION.—Terraced cultivation is practised to perfection in the Himalayas. By this method space and water are utilised to the best advantage. Near the plains tropical crops, **rice**, **maize**, and **millets**, are grown, and at higher elevations **wheat** and **barley**. Damp heat is very favourable to the growth of **tea**, and important gardens are found in Assam, in the neighbourhood of Darjiling, in the Dun, and in the Kangra Valley. **Fruit** is grown in the drier and sunnier parts of the range to the east, especially in Kashmir, and in the Kulu district of the Punjab.

ANIMALS.—The forests of the Himalayas afford shelter to wild animals and birds in large numbers and in great variety. The **elephant**, **rhinoceros**, and **tiger** are found near the plains at the eastern end of the range, and the **leopard** is generally distributed. The **bear** wanders through the pine forests, and small fur-bearing animals, such as **martens** and **weasels**, are common. A few varieties of **monkey** are found, and the **lemur**

in Assam. **Deer** and **goats** are met with, the **ibex** being common in Kashmir. The long-haired goat is sought for on account of its hair.

The variety of birds is even greater than that of animals. The **eagle, vulture, owl,** and **hornbill** are amongst the larger species, while some of the smaller birds are remarkable for the beauty of their plumage. **Snakes** are abundant, and the **butterflies** are numerous and gorgeous in colour.

PEOPLE.—The character of the people changes as we proceed from one end of the range to the other. In the east there are a number of tribes under petty chiefs, and these resemble the **Tibetans** in physique, language, and customs. Towards the centre of the range, in Nepal, a gradual change occurs, Indian languages and customs superseding Tibetan. At the western end **Muhammadan** influence prevails, on account of its proximity to the Muhammadan countries of South-west Asia.

2. THE INDO-GANGETIC PLAIN

EXTENT AND BOUNDARIES.—This plain stretches right across the north of India, and forms the major portion of the continental part of the country. At its western end it extends over **10 degrees of latitude**—from Peshawar to the Rann of Cutch—and tapers off in its eastern extremity along the narrow valley of the Brahmaputra. It is enclosed on the west and north by the great northern mountain wall, and abuts on to the sea at the mouths of the Indus and Ganges. From the valley of the Ganges the plain gradually rises towards the south, forming a triangular-shaped elevated mass known as the **Central India Highlands,** which are terminated westwards by the **Aravalli Hills,** and which merge, in the vicinity of the Tropic of Cancer, into the **Vindhya Range**—the northern boundary of the Deccan Plateau.

DRAINAGE.—The plain is divided into two parts by a low watershed, which runs from north to south along a line from the Simla Hills through Delhi, and thence along the **Aravalli Hills.** The valley of the **Indus** on the west slopes to the south-west, the valley of the **Ganges** to the east, and the slope of the **Brahmaputra** valley is towards the west as far as the 90th degree of

East Longitude, where it turns south, retaining this direction as far as the delta. The slope of the Central Highlands is to the north-east, and the Ganges receives several tributaries from this direction on its right bank.

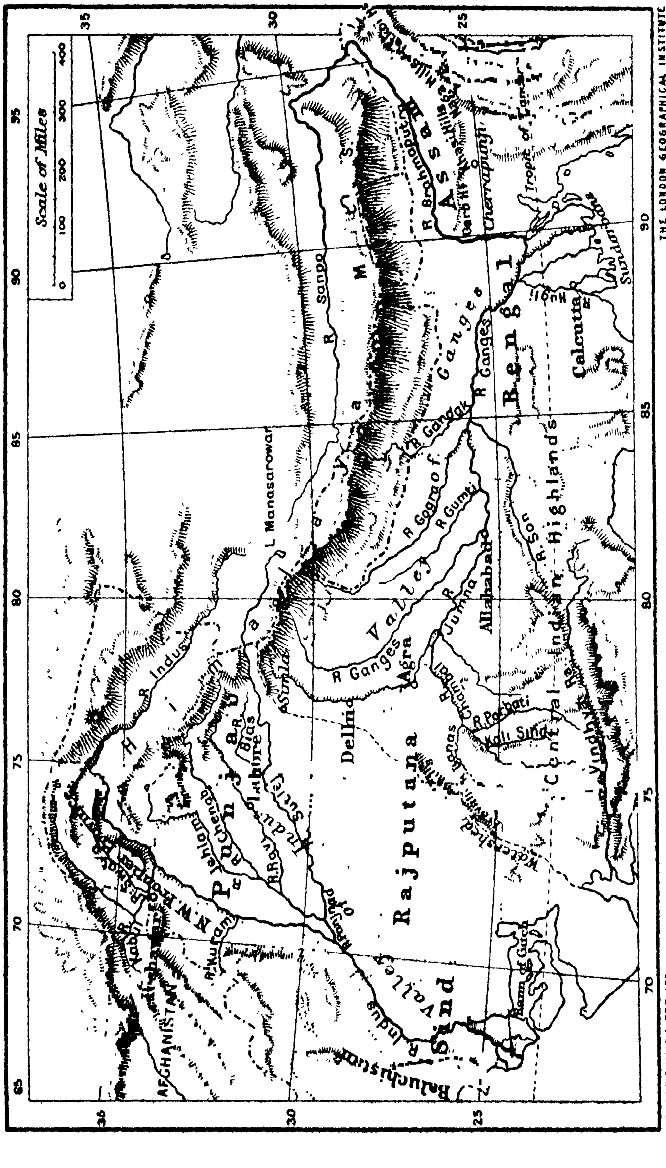
RIVERS.—To the south-east of Kashmir, and to the north of the main chain of the Himalayas, lies the sacred **Manasarawar Lake,** or collection of lakes, at an elevation of over **15,000 ft.** Within a small radius of this spot rise the great rivers of Northern India—the **Indus, Ganges,** and **Brahmaputra**—together with the **Sutlej, Jumna,** and **Gogra.** The Indus flows for 500, and the Brahmaputra (under the name of Tsan-po) for 800 miles in mountain valleys to the north of the range before turning south into India, while the Sutlej, Jumna, Ganges, and Gogra carve their way, often through very deep gorges, to their lower courses on the great plain.

1. The **Indus.**—The main course of this river forms almost a right angle, its direction in the mountains being to the north-west, and on the plain to the south-west. Owing to the proximity of its bed to the mountain ranges on the north-west frontier of India, its tributaries on the right bank are unimportant. The only considerable one is the **Kabul River,** which comes from Afghanistan. Smaller streams are the **Swat** and the **Kuram.** The Indus flows for hundreds of miles through the rainless belt, and receives therefore no tributary worth the name below the junction of the **Punjnad,** which receives its waters from the Himalayas by the **five rivers of the Punjab.**

The **Punjnad** is made up of two streams, the **Chenab** and the **Sutlej.** The former brings with it the waters of the **Jehlam** and the **Ravi,** the latter those of the **Bias.** All these rivers are singularly deficient in small tributaries, and in order to irrigate the naturally fertile province of the Punjab an extensive system of canals has been constructed, the head-works of which are located at the places where the rivers leave the mountains. The total length of the river is about 1,800 miles, and it finally breaks into a delta at the head of the Arabian Sea.

2. The **Ganges** is for several reasons the most important river in India. Its valley was the home of an ancient civilisation; it has for centuries supported a large population; it is navigable for a considerable part of its course; and it is held in great veneration

FIG. 46.—MAP OF THE INDUS AND GANGES.



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by the Hindus. It is fed by a number of tributaries, the waters of which rise every year from the melting of the snows of the Himalayas and the monsoon rainfall. Not only is the whole area most effectually irrigated by these means, but the silt which is brought down and deposited is mainly responsible for the great fertility of the Ganges valley.

The chief tributaries draining the Himalayan region are the **Jumna, Gumti, Gogra,** and **Gandak.** The first of these joins the main stream on the right bank at **Allahabad,** the others join the left bank. The Gogra brings down the largest volume of water of all the streams, not excepting the Ganges itself.

The Central Highlands are drained by the **Chambal** and the **Son.** The former is a feeder of the Jumna, and brings with it the waters of a large number of streams, the chief of which are the **Banas,** the **Kali Sind,** and the **Parbati.**

After a course of about 1,500 miles the Ganges flows into the head of the Bay of Bengal by a delta of great extent, which encloses the district known as the **Sundarbans.** The chief mouth is the **Hugli,** on which stands **Calcutta.**

3. The **Brahmaputra** becomes an Indian river after breaking through the mountains in North-eastern Assam. It flows south-west for some distance, draining a narrow valley bounded northwards by the Himalaya Mountains, and on the south by the **Patkoi, Naga, Khasi,** and **Garo Hills.** On getting clear of the Garo Hills, the Brahmaputra bends sharply to the south and joins the delta of the Ganges. In no part of its Indian course is the bed of this river more than 600 ft. above sea-level, and it therefore flows slowly enough to be largely used for traffic between Assam and Lower Bengal.

The rivers of Northern India present several noteworthy features :—

1. They are **typical in their stages.** They have a rapid upper course in the mountains, a slower lower course on the plain, and empty themselves into the ocean by deltas, these deltas being due to the deposition of the silt brought down from the mountains.

2. They are **valuable as irrigating and fertilising agents.** The extraordinary fertility of Northern India is very largely due to the presence of these rivers.

3. They afford ready **highways for traffic.** Of the three rivers the Indus is the least navigable. The North Punjab is considerably higher than Sind, and the current of the Indus is therefore comparatively rapid. This rapidity of current and the shallowness of its bed render navigation difficult in certain parts of its course.

CLIMATE AND RAINFALL.—The Indian rainfall is periodic, most of it being received during the **summer monsoon,** from May to September. The south-east trade wind becomes a south-west wind after crossing the Equator, owing to the decreasing rate of the Earth's revolution, and the result is that the rain-bearing winds strike the peninsula on its western side and travel across the plain in a north-easterly direction to the Himalaya Mountains. The influence of these winds is felt but little west of the Aravalli Hills, and although the Punjab receives a certain amount of rain from the deflection of the current westwards along the main chain, Sind receives practically no rain at all. Towards the east of the plain the monsoon rains are usually heavy and the Bay of Bengal current brings much additional rain to Lower Bengal and Assam, the general result being that the humidity increases across the plain from west to east. This fact has an important bearing on the climate, for the greater humidity makes the **climate of Bengal and Assam** much more **equable** than that of the **Punjab and Sind,** where the summer and winter temperatures are alike **extreme.** The amount of rain received in North India during the winter monsoon is comparatively small.

The rainfall at Lahore is about 20 inches per year, at Calcutta about 65, while at Cherrapunji the average is about 500 inches.

VEGETATION.—In the dry region of Sind to the west, the **palm** and **tamarisk** are among the few trees which flourish in spite of the drought, but in the well-irrigated doabs of the Punjab, vegetation is both varied and plentiful. Forests are preserved in the Terai—the belt of jungle at the foot of the Himalayas—in the Central Highlands, and in Assam. The **sal** is the chief tree along the northern edge of the plain, and **teak** is found in Central India. Tropical forest trees are more or less abundant all along the valley of the Ganges, and especially in its delta. The occurrence of the **mulberry tree** in Bengal accounts for the presence of the silkworm and of the silk industry.

CULTIVATION.—**Wheat** and **barley,** not usually grown in sub-tropical countries, flourish during the cold winter of the Punjab, and the Punjab seed trade is annually becoming more important. **Millets, sugar-cane,** and **oil-seeds (linseed, rape, castor, sesamum,** &c.) are grown all over the plain. In the more humid and equable climate to the east, **opium, indigo,** and **jute** thrive well, and **rice** is extensively grown in the Ganges valley where the fields are easily flooded.

The method of irrigation is chiefly by means of **canals** in the valley of the Indus, and by **tanks** and **wells** in the valley of the Ganges.

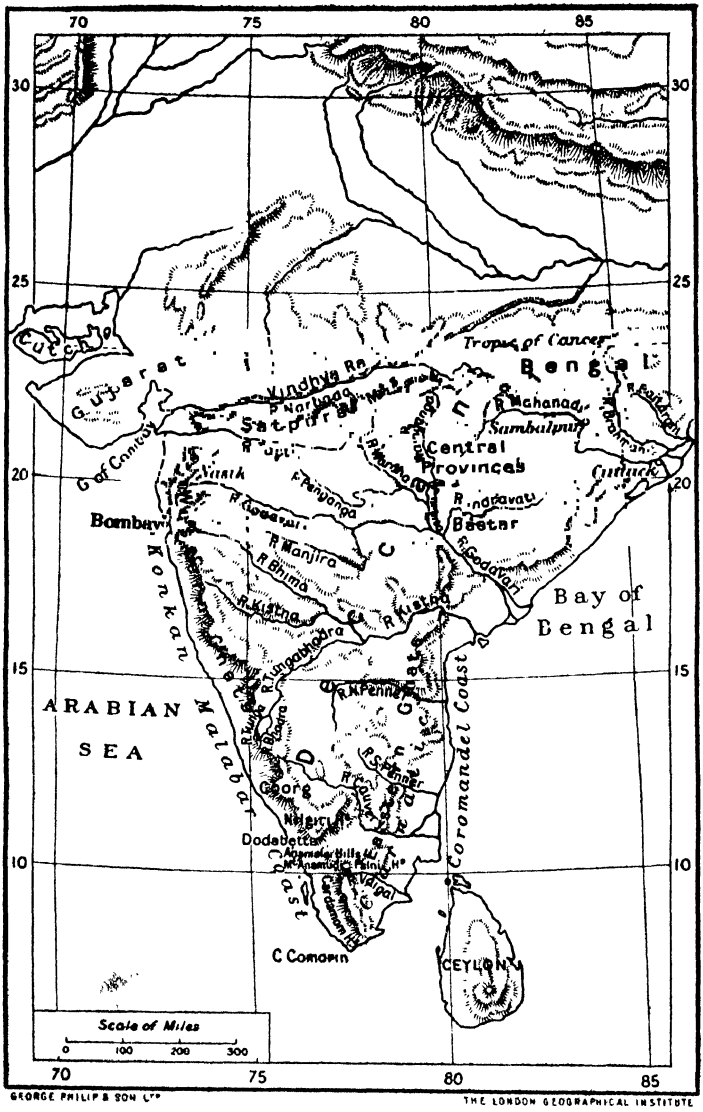
ANIMALS.—The chief wild animals are the **jackal,** the **hyæna,** the **leopard,** and the **tiger.** The **elephant** is found in Assam, and so is the **rhinoceros.** The **wild ass** occurs in Sind, and **deer** and **monkeys** are commonly distributed. The **camel** is used for purposes of transport in Sind, and the **buffalo** and the **ox** in all parts. Many kinds of **snakes** abound, **crocodiles** are found in the rivers, and the **lac insect** is common in the forests of Bengal and Assam.

PEOPLE.—The variation which was observed in travelling from east to west of the mountains is noticeable to some extent also on the plains. The **Tibetan type** is found in Assam, where the Mongolian could find his way through the passes, and the **Pathan** has come down from the Muhammadan countries to the west into the Punjab and North-West Frontier Province. Practically the whole of the Indo-Gangetic plain is peopled by the **Aryan race. Dravidians** are found in the hilly country to the south of Bengal and in the Aravalli Hills; the **Brahuis** of Baluchistan, who find their way into Sind, are also a Dravidian people. The **Sikhs** of the Punjab and the **Rajputs** of Rajputana are among the most soldierly of the people of India.

3. THE DECCAN

EXTENT.—The Deccan tableland is triangular in shape, the base being the **Vindhya Range** and its hilly eastern extension, which correspond roughly with the Tropic of Cancer; and its apex **Cape Comorin.** The Deccan may therefore be said to consist of the whole of peninsular India which lies within the Tropics,

FIG. 47.—MAP OF THE DECCAN.



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except Gujarat and Kutch on the west, and Southern Bengal on the east. Cape Comorin lies on the 8th parallel of latitude, so that the plateau extends over 15½° from north to south.

RELIEF.—The Deccan is bounded on its three sides by mountain ranges: on the north by the two parallel chains, the **Vindhya** and the **Satpura Mountains**; on the west by the **Western Ghats**, and on the east by the **Eastern Ghats**. The two ranges of Ghats meet and culminate in the south in a knot of mountains—the **Nilgiri Hills.**

The Western Ghats form a continuous chain which rises above 4,000 ft. for the greater part of its length, and reaches its greatest height (**8,750 ft.**) in **Dodabetta** in the Nilgiri Hills. From this long flanking wall the plateau slopes gently away to the east, so that all the drainage is from west to east. It will be readily seen, therefore, that the Eastern Ghats are much lower and much less continuous than the Western Ghats. South of the Nilgiris is the **Palghat Gap**, a remarkable depression, separating the Western Ghats from the hills in the south of the peninsula. These are in three short chains, which radiate from a central knot, viz. the **Anamalai Hills**, which culminate in the peak of **Anamudi**, the highest in the Deccan—about 8,850 ft. above sea-level; the **Pulni Hills**, which strike eastwards; and the **Cardamom Hills**, which run southwards, dividing Travancore from the Madras Presidency.

Bounding the Deccan on the east and west are two **coast strips** of flat land, that on the west being much narrower than that on the east. The western coast strip is called the **Konkan** in the north and the **Malabar Coast** in the south. The eastern coast strip is known as the **Coromandel coast**; the southern part, where it is much wider than in the north, receiving the special name of the **Carnatic.**

DRAINAGE.—The general slope of the tableland we have seen to be from west to east; most of the great rivers therefore flow into the Bay of Bengal. North of the Western Ghats, however, the drainage of the Vindhya and Satpura Mountains is westwards into the Arabian Sea.

Flowing into the Bay of Bengal are the **Mahanadi, Godaveri, Kistna, North** and **South Penner, Cauvery,** and **Vaigai**; and into the Arabian Sea, the **Tapti** and **Narbada.**

1. The **Mahanadi** rises near the borders of Bastar State, and flows in a great curve as far as Sambalpur. Below this town it descends into the coastal plain through a gorge. It then breaks up into a large delta, which encloses the district of Cuttack, and which receives the waters of the **Brahmini** and **Baitarani** from the north. The Mahanadi is navigable for a considerable part of its course.

2. The **Godaveri** traverses almost the entire breadth of the peninsula, rising in the Western Ghats, near Nasik, within fifty miles of the western coast. It flows almost due east until, after passing through a remarkable gorge, it enters the coast plain, which penetrates at this point for a considerable distance into the tableland. The most important tributary is the **Pranhita,** which is made up of three streams—the **Painganga,** the **Warda,** and the **Wainganga.** Smaller streams are the **Indravati,** also on the left bank, and the **Manjira** on the right bank. The Godaveri is the longest river of the Deccan (800 miles) and has the largest basin.

3. The **Kistna** also rises at no great distance from the west coast, its general course from source to mouth converging towards that of the Godaveri. Like the other Deccan rivers of the east coast, it breaks through the Eastern Ghats in a gorge, and enters the ocean by a delta. The chief tributaries are the **Bhima** on the left bank, and the **Tungabhadra** (formed by the Tunga and the Bhadra) on the right bank.

The **Cauvery** rises in Coorg, and has a general course to the south-east. It encloses a series of islands in its course, and the rapids formed in its descent to the coast-plain are, in some places, of great beauty.

The **Narbada** and **Tapti** are the only rivers of importance which drain from the plateau into the Arabian Sea. They have almost parallel courses, the former between the Vindhya and Satpura Ranges, and the latter south of the Satpura. Both rivers rise high on the plateau, both have rapid courses through deep gorges, both enter the Gulf of Cambay by an estuary, and both are unnavigable except for a few miles at their mouths. The Narbada is esteemed by Hindus with a veneration almost equal to that with which the Ganges is regarded.

Comparison of the Rivers of the Deccan and those of the

Northern Plain.—1. The rivers of Northern India obtain their supply of water chiefly from the melting of the snows on the Himalaya Mountains, while the rivers of the Deccan are fed almost entirely by the rains which fall during the monsoon seasons. The chief result of this is that whereas the great rivers of Northern India have a fairly steady supply of water throughout the year, the rivers of the Deccan are in heavy flood during a part of the year, and are almost dry at other times.

2. The stages of the rivers of Northern India are typical; those of the Deccan have long upper courses on the plateau, a short descent through gorges on to the coast-plain, a short lower course, and deltas at their mouths.

3. The rivers of the Deccan are less valuable for purposes of irrigation and navigation than the rivers of Northern India.

NOTE.—The rivers rising in the Western Ghats bring down water to their lower courses during the early monsoon period, and thus irrigate the eastern coast-plain before the arrival of the rains.

CLIMATE AND RAINFALL.—Peninsular India has an **equable climate**, although the mean temperature of the coast-strips is much higher than that of the tableland. This uniformity is due—more especially in the case of the coast-plains—to the proximity of the ocean, and—in the case of the interior—to the elevation.

The greater part of the rainfall is received during the south-west monsoon. The rain-bearing winds strike the western face of the Western Ghats, and here abundant rain is received. But before the winds can cross the mountains they have been deprived of much of their moisture, and hence the rainfall of the Deccan is uncertain. Towards the north of the plateau the Vindhya and Satpura Mountains, running east and west, allow the monsoon winds to penetrate for a considerable distance inland before depositing their moisture.

The eastern coast strip, and especially the southern portion of it, receives considerable rainfall from the north-east monsoon.

VEGETATION.—The mountain ranges of the north, west, and south are clothed with forests, the chief trees being **teak, sal, ebony,** and **sandalwood.** The **cinchona** tree, from the bark of which **quinine** is made, is also grown on the mountains, and

the **coco-nut palm** grows on the coast-plains, in the south of the peninsula.

The most important cultivated crop of the Deccan is **cotton**, which thrives in the black soil. **Rice** is grown on the Madras coast-plains, and **millets, oil-seeds, sugar-cane**, and **tobacco** are fairly generally distributed. **Tea** and **coffee** shrubs grow well on the warm damp hillsides in the south, and **spices** flourish along the south-east coast strip.

ANIMALS.—The animals of the Deccan do not differ materially from those of Northern India. The **tiger, hyæna**, and **jackal** are met with in all parts, and the **elephant** roams wild in Mysore and South India, where **wild buffaloes** are also found. The **ox** and **buffalo** are generally employed for draught purposes. The **birds, reptiles**, and **insects** are also those common to the whole of India.

PEOPLE.—The highlands of the Deccan have always, at the time of invasion, afforded a place of refuge to the conquered peoples of the northern plain, and here they have resisted their foes. Hence we find in this part of India **Dravidian** races; **aboriginal tribes**, such as the **Gonds** of the Central Provinces and the **Todas** of the Nilgiri Hills; also the soldierly **Mahratta** of the west. **Parsis**, who are thinly spread all over India, are specially prominent in Bombay—that being, at the time of their flight, the port nearest Persia, their original home, and being also a suitable centre for their commercial activity.

4. BURMA

EXTENT.—The 'physical' region of which the province of Burma forms a part extends over the whole of the most eastern of the three peninsulas to the south of Asia. On the west the boundary of the region is the Bay of Bengal, which is broken near the 16th parallel by the Gulf of Martaban. The boundary between the provinces of Burma and Assam on the north does not coincide with the physical boundary, for the mountains of Burma merge for some distance on to the plain to the south of the river Brahmaputra. The eastern limit of British territory is an irregular line stretching from the 28th parallel to the Isthmus of Kra, drawn without particular reference to the physical contour.

RELIEF.—Burma is essentially a mountainous country, the more or less **parallel ranges** being a continuation southwards of the eastern end of the Himalayan chain. These ranges alternate with the river valleys, the general slope of the land being from north to south.

1. Between the coast and the Chindwin River are the **Patkoi Hills,** the **Naga Hills,** and the **Lushai Hills.** These are continued southwards in the **Arakan Yoma,** between the lower course of the Irawadi and the sea; this range terminates in **Cape Negrais.**

2. The next ridge—the **Pegu Yoma**—is broken into two parts by the bend in the Irawadi near Mandalay. This range separates the valleys of the Chindwin and Irawadi in the north, and those of the Irawadi and Sittang in the south.

3. Chinese influence is to be seen in the name of the third range—the **Rung-lung**—which divides the upper Irawadi and Sittang valleys from that of the Salwin. This range is continued southward into the Malay Peninsula.

DRAINAGE.—The rivers have all been referred to above and their courses indicated. They flow in parallel valleys: in the western valley, the **Chindwin** and the lower course of its main stream—the **Irawadi**; in the central one, the upper course of the Irawadi and the **Sittang**; and on the east, the **Salwin.**

1. The constancy of the rainfall keeps all these rivers well supplied with water, and they are all useful for irrigation. In April they begin to swell as the snow melts on the mountains of the interior, and they continue in full flood all the summer.

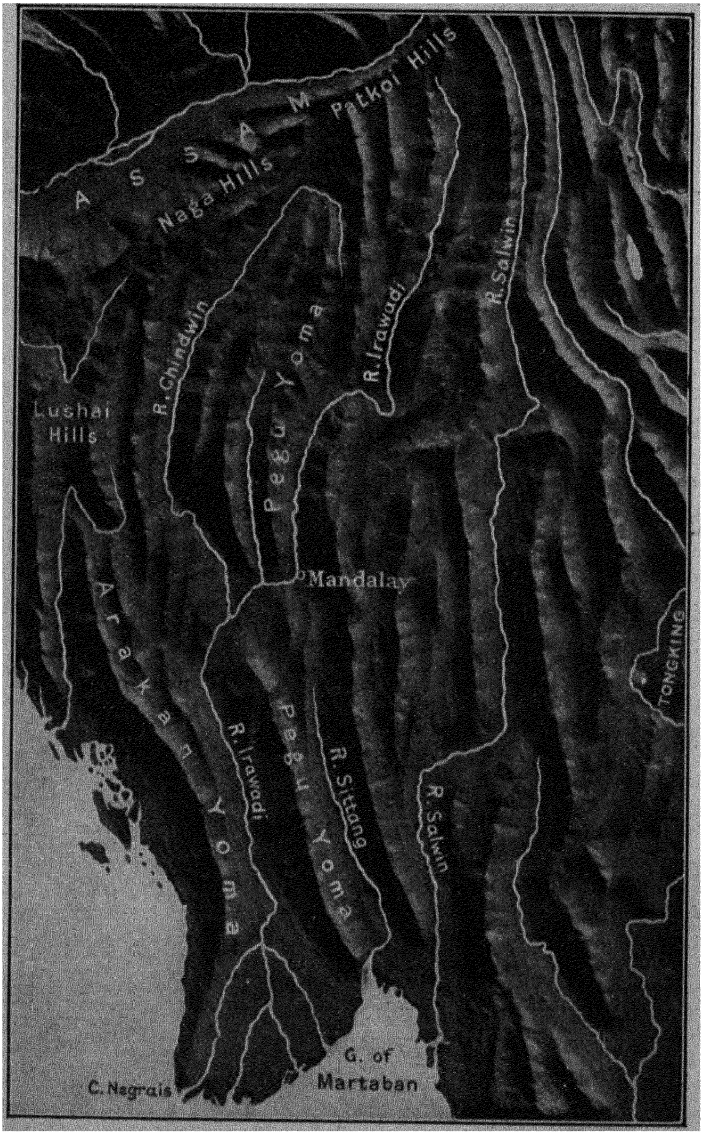
2. The Salwin flows through mountain gorges and the Sittang is blocked by shoals, hence these streams are of little use for navigation. The Irawadi, on the other hand, is navigable for 800 miles, and is the great commercial highway of Burma.

3. The Irawadi enters the ocean by a delta, the Sittang and Salwin by estuaries.

4. The Irawadi has a long 'plains stage,' the Sittang has practically no 'mountain stage,' and the Salwin has little or no 'plains stage.'

RAINFALL AND CLIMATE.—The rainfall of Burma is generally abundant. The south-west monsoon winds bring **very heavy rain** to the **coast regions,** and an **ample** though less heavy fall to the **lower basins of the rivers** further inland. The only

FIG. 48.—RELIEF MAP OF BURMA.



area which can be called **dry** is in the **northern interior**, the winds which reach this part of the country having been deprived of their moisture in passing over the mountains nearer the coast.

These facts, together with the latitude and elevation, account for the climate, which is **hot and moist** in **Lower Burma**, and **cooler and drier** in the **mountainous districts of the north-east.**

PRODUCTIONS.—A large part of Burma is covered with forests under Government preservation. The principal timber is **teak**, and **rubber** trees are also largely cultivated. **Rice** is the chief crop grown, the wet climate and splendid river system favouring the success of this grain. Other crops are those common to the whole of India—**sugar-cane, tobacco, cotton**, and **millets.**

PEOPLE.—The mountains to the north of Burma have kept that country distinct from India as effectually as the Himalaya Range has kept India and China apart. The people are therefore mainly **Mongolian** in race, the foreign element being modern and due to recent commercial development. The hills of the interior are the home of many wild tribes, of whom the best known are the **Shans**, who inhabit the country to the east of Mandalay, and the **Kachins** of the extreme north-east.

EXAMINATION PAPERS

A. 1. What natural advantages does India enjoy with regard to (1) position, (2) boundaries?

2. Describe a coasting voyage from Karachi to Rangoon, stating in order the chief ports, openings, and river mouths passed.

3. Give an account of the great mountain region of North India.

4. Show clearly why the height of the snow-line increases as we travel northwards across the Himalaya Range.

B. 1. Give an account of the drainage of the Punjab.

2. Draw a sketch-map of the Ganges, and insert the chief tributaries and towns on their banks.

3. Show clearly why the climate of Sind is more extreme than that of regions in the same latitude further to the east.

4. In what localities are the following products grown:—wheat, cotton, rice, tea? Why is each grown in the particular locality?

C. 1. Describe the physical features of the Deccan, and show the effect of the contour of the land upon the rainfall.

2. Name the chief rivers of the Deccan. Compare and contrast them with the rivers of Northern India.

3. How does the east coast of the peninsula differ from the west? What is the commercial effect?
4. What are the chief vegetable products of the Deccan? Where are they respectively grown?

D. 1. Describe with a sketch-map the mountain system of Burma.
2. Write an account of the river Irawadi. What is its value as a commercial highway?
3. Compare the effect of the monsoon in Burma and the Deccan.
4. What races and tribes of people inhabit Burma?

E. 1. Which of the Indian rivers are used (1) for irrigation, (2) as highways, (3) as boundaries.
2. What are the chief forest products of India? Where are they found?
3. Compare the rainfall of Bombay and Madras as to (1) season, (2) amount, (3) direction of rain-bearing winds.
4. Between what parallels of latitude does India lie? What proportion of the country lies within the Tropics?

PEOPLE AND LANGUAGES OF THE EMPIRE.—The number of races and tribes in India is very large, and the variety of languages and dialects larger still. Speaking generally, the races of India may be classified as **Aboriginal, Dravidian, Aryan,** and **Tibeto-Burman.**

1. **Aboriginal.**—These are the **Kolarian** * **tribes,** which are found scattered to the north of the great plain and to the north of the great plateau. The **Bhils** of Indore and Rajputana and the **Santals** of Bihar are the best known.

2. **Dravidian.**—This race is mainly confined to South India and the Deccan, where they were driven by the Aryans. They are generally supposed to have entered India from the north-east, but a later theory is that they came by way of Persia, Baluchistan, and Sind, and the presence of the **Brahui** (an isolated Dravidian tribe) in Baluchistan supports this view. The chief languages of the Dravidian peoples are **Tamil, Telugu,** and **Kanarese.** A few isolated tribes retain the early characteristics of the race: such are the **Gonds** of Bastar and the **Todas** of the Nilgiris. The total Dravidian population is just under 60 millions.

3. **Aryan.**—This race came into India from the north-west and drove the Dravidian southwards. Although their influence

* Some authorities connect the word *kuli* (cooli) with the generic name *Kolarian*

has spread over the whole country, they were really established in the northern plain. The Aryan group of Indian languages can be traced to **Sanskrit,** the chief members of the group being **Bengali, Hindi, Marathi, Gujarati,** and **Punjabi.** The total Aryan population is over 221 millions.

4. **Tibeto-Burman.**—The people of this race are Mongolian and inhabit Burma and the countries bordering on Tibet, *e.g.* Nepal, Sikkim, and Bhutan, and the Ladakh district of Kashmir. The language of Burma is **Burmese,** and of the Himalayan tracts dialects of **Tibetan.** Population, $11\frac{3}{4}$ millions.

The **Europeans** in India number only 270,000, and **Parsis** and **Eurasians** less than a lakh each.

The total population of the Indian Empire in 1901 was 294,361,056.

RELIGIONS OF THE EMPIRE.—1. **Animism** or **Fetish-worship** is a religion of fear which teaches that spirits (Lat. *animus*—a spirit) dwell in natural objects, such as rocks, trees, &c., and that these spirits have to be worshipped and propitiated. This form of religion is practised among the forest races of the centre and south of the peninsula, and on the lower Himalayas. The chief of these tribes are the **Santals, Gonds,** and **Bhils** of Central India, the **Badagas** and **Kurumbas** of South India, and the **Nagas** of Assam.

2. **Hinduism** is a general term applied to the religion of those who preserve caste and reverence Brahmans. The religion —**Brahmanism**—of which it is in many cases a modification, is one of the most ancient systems in the world. Nearly three-quarters of the people of India are Hindus.

3. **Buddhism,** founded by Buddha 2,500 years ago, did not remain permanently the religion of India Proper, and now prevails only in Burma and to a small extent in the Himalayas. Its influence, however, may be traced in the present Hindu religion.

4. **Muhammadanism** has followers in all parts of the Empire, but the only divisions in which the majority of the people are of this creed are those in the north-west—Kashmir, North-West Frontier Province, the Punjab, Baluchistan, and Sind—and Eastern Bengal.

5. **Christianity** is professed by about 1 per cent. of the population. The largest colonies of Indian Christians are in South India.

Sikhs and **Jains** are not numerous. The former are found chiefly in the Punjab and the latter in Western India.

OCCUPATIONS OF THE PEOPLE.—1. **AGRICULTURE** is the employment of about three-quarters of the population, and nearly the whole of this vast number depend upon the rains for their very existence. In the Punjab, which is outside the monsoon region, and to some extent in the United Provinces, Bengal, and Madras, **canal irrigation** removes much anxiety on account of deficient rainfall. The chief crops raised may be classified into (1) **Foods**; (2) **Fibres**; (3) **Oil-seeds**; (4) **Drugs, beverages, &c.**

(1) **Foods.**—**Rice** is by far the most important food-grain cultivated in India. It requires a wet climate, as it has to be flooded for some weeks in the early stages of its growth. ~~It is therefore grown~~ (*a*) in the **valley of the Ganges**, which is flooded during the monsoon; (*b*) on the **Madras coast-strip**, which is abundantly watered by the rivers; and (*c*) in **Burma**, which has a heavy rainfall.

Wheat is indigenous to the temperate zone, and is therefore a winter crop in India, and only in those provinces—*e.g.* the **Punjab** and **United Provinces**—which have a pronounced cold weather.

Barley requires similar conditions to wheat, but being less in demand as a commercial commodity, is not so extensively cultivated.

Millets and **other grains**, such as **maize** and **pulse**, form the staple food of a large section of the population, and are grown more or less all over the country.

Sugar-cane does not require so much water as rice, but the conditions favourable to rice are generally favourable to sugar-cane also. This crop is reared, therefore, in the rice-growing provinces (see above) and in the Punjab.

Spices are chiefly grown in the extreme south, but certain varieties for general use, *e.g.* chillies, are cultivated everywhere.

(2) **Fibres.**—**Cotton** is the chief fibre produced in India. The soil best suited to its growth is the 'black soil' of the Deccan, and the **Bombay Presidency** is the most important

cotton-growing area. It is grown in smaller quantities in nearly all the provinces. Indian cotton is generally of 'short staple.'

Jute requires a good deal of water and a rich soil. A soil, therefore, which cannot be kept damp and which cannot be continually replenished is not suited to its growth. The **lower course of the Ganges,** which fulfils both these conditions, is the most important jute-growing centre in the world.

Hemp and flax are obtained from the stems of plants which are generally grown.

Silk is obtained from cocoons which are collected in the forests of Bengal, Assam, and other parts.

(3) **Oil-seeds.**—The seeds from which oil is expressed are cultivated in most parts of the country. The chief are **linseed** (the seed of the flax plant), **sesamum** or **gingili**, **castor** (which produces castor oil), and **rape** (from which is extracted colza oil). **Cotton** seeds also yield a valuable oil. The residue after the oil has been expressed is called **oil-cake**, and is used as food for cattle.

Sesamum is cultivated chiefly in Bengal and Burma; **linseed** in the Punjab and United Provinces; **castor** in the Ganges valley.

(4) **Drugs, Beverages, &c.**—**Opium** is a drug obtained from the seed of the **poppy**. Its sale is a Government monopoly. The poppy is grown on a large scale in the United Provinces, Bengal, and Central India.

Hemp, which has been mentioned above as producing a fibre, is also grown for the sake of the narcotics, **bhang** and **charas**, which are obtained from it.

Tobacco is chiefly grown in the Madras Presidency and in Burma. It is also cultivated in the valley of the Ganges.

Tea requires a wet climate, but it is best suited to a sloping soil from which the water can drain easily. It is therefore grown on the hills in Assam, in Dehra Dun, the Kangra Valley, and on the Nilgiris.

The districts known as the Terai and Dooars at the foot of the Himalayas are famous for their tea gardens. The tea produced is not so finely flavoured as the hill teas.

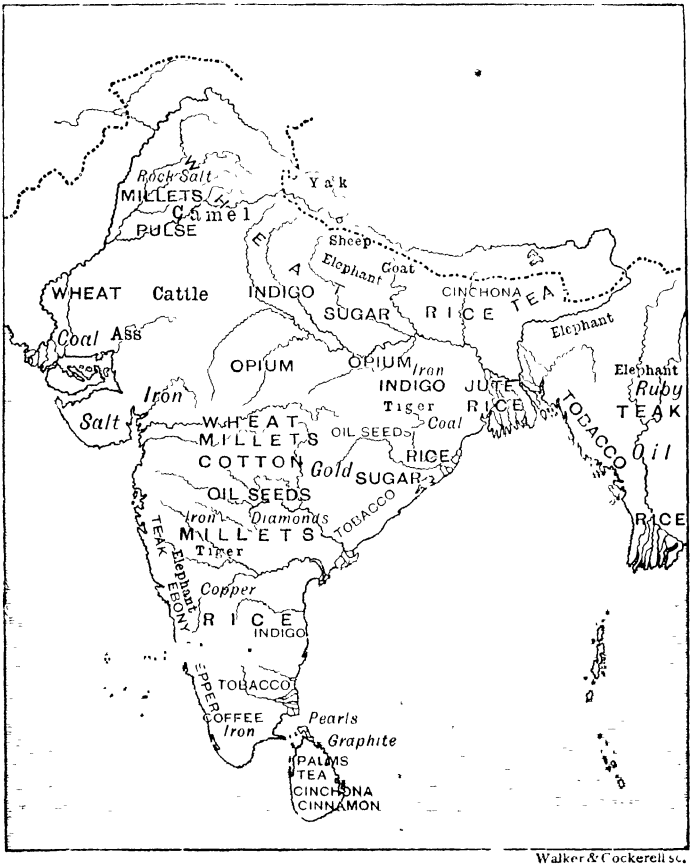
Coffee requires less moisture than tea, and thrives where the rainfall is not heavy. It is chiefly produced in Coorg, Mysore, and the south of the peninsula.

The **cinchona tree,** from the bark (*Peruvian bark*) of which **quinine** is made, is also grown on the hills of South India,

where the climate is most like that of Peru, whence it was introduced.

Indigo, which yields a blue dye, is cultivated in Bihar and the valley of the Ganges generally, and also in Madras, but since

FIG. 49.—INDIA. PRODUCTS.



Walker & Cockerell sc.

the dye has been manufactured chemically, the cultivation of the indigo plant has decreased.

2. MINING.—The mineral wealth of India has not yet been fully explored.

Gold.—This metal is mined chiefly in Mysore. It is also found in small quantities in some of the river beds.

Coal.—The chief mines are in Bengal, in the valley of the River Damodar, which flows into the Ganges delta. Asansol is the centre of the coal district. The mineral is also found in Assam and the Central Provinces.

Iron.—The best iron ore is found in Madras, but the absence of coal and limestone prevents it from being extensively worked. The ore found in Bengal, however, is smelted, on account of the proximity of the coal-mines.

Salt is dug from the Salt Range in the Punjab, collected from the shores of Sambhar Lake in Rajputana, and obtained by evaporation from sea-water round the coasts.

Petroleum is obtained in large quantities from Upper Burma.

Mica is found in larger quantities in India than in any other country. The supplies come chiefly from Bengal and Madras.

Manganese ore is being worked in the Central Provinces and in Madras.

Tin is found in the Tenasserim provinces.

Of precious stones, **rubies** are found in Burma and **diamonds** in Haidarabad. (Compare the localities of the minerals with the 'old' part of the country. See above, 'Geological History,' page 67.)

3. **MANUFACTURES.**—Manufacture on a large scale in India has only recently begun to be developed, although in all parts of the country **local industries** are carried on to supply the immediate needs of the people. The factories are springing up chiefly in the large centres of population.

In agricultural districts products of the soil are prepared for the market. The following are the most important:—

Jute is manufactured in Lower Bengal; **opium** in the United Provinces, Bengal, and Madras; **tea** in Assam, the Punjab, and South India; **cotton** in the Bombay Presidency, and on a smaller scale in almost every province; **indigo** in the provinces in which it is grown; and **wool** in the Punjab and United Provinces; **rice mills,** in which the grain is prepared for use, have been erected in Bengal, Madras, and Burma; and **cigars** are largely manufactured in Burma and the Madras Presidency.

MEANS OF COMMUNICATION.—There are about **30,000 miles** of railway open for traffic in India (1907), and additions

are at present being made at the rate of about 1,000 miles every year. The great railway systems run inland from the chief ports—**Calcutta, Bombay, Madras, Karachi,** and **Rangoon**; the systems of the north and north-west meet at **Delhi**.

Railways connecting with Calcutta.—1. **The East Indian Railway**—2,300 miles of line—runs from Calcutta (Howrah) to Delhi and to Jubbulpore.

2. **The Eastern Bengal** and the **Assam Railways** carry the trade of the new province.

3. **The Bengal and North-Western Railway**—1,400 miles—connects Bengal with the United Provinces.

4. **The Oudh and Rohilkand Railway**—1,000 miles—extends from Moghal Serai to Saharanpur.

5. **The Bengal-Nagpur Railway** 1,700 miles—has two main lines from Howrah. One runs inland to Nagpur, the other follows the coast to Waltair, near Vizagapatam.

Connecting with Karachi.—6. **The North-Western Railway**—over 4,000 miles, and the most extensive railway system in the world—extends from Karachi to Jamrud on the frontier of Afghanistan, with a branch to Quetta, while a second main line runs from Lahore to Delhi.

Connecting with Bombay.—7. **The Great Indian Peninsula Railway**—2,800 miles—has two branches from Bombay, one to Agra, and another *via* Poona to Wadi.

8. **The Bombay, Baroda, and Central India Railway**—2,800 miles—connects Bombay, *via* Ajmere, with Delhi.

Connecting with Madras.—9. **The Madras Railway**—1,600 miles—connects Madras with Vizagapatam, and so with Calcutta (see No. 5 above), and also with Calicut on the west coast.

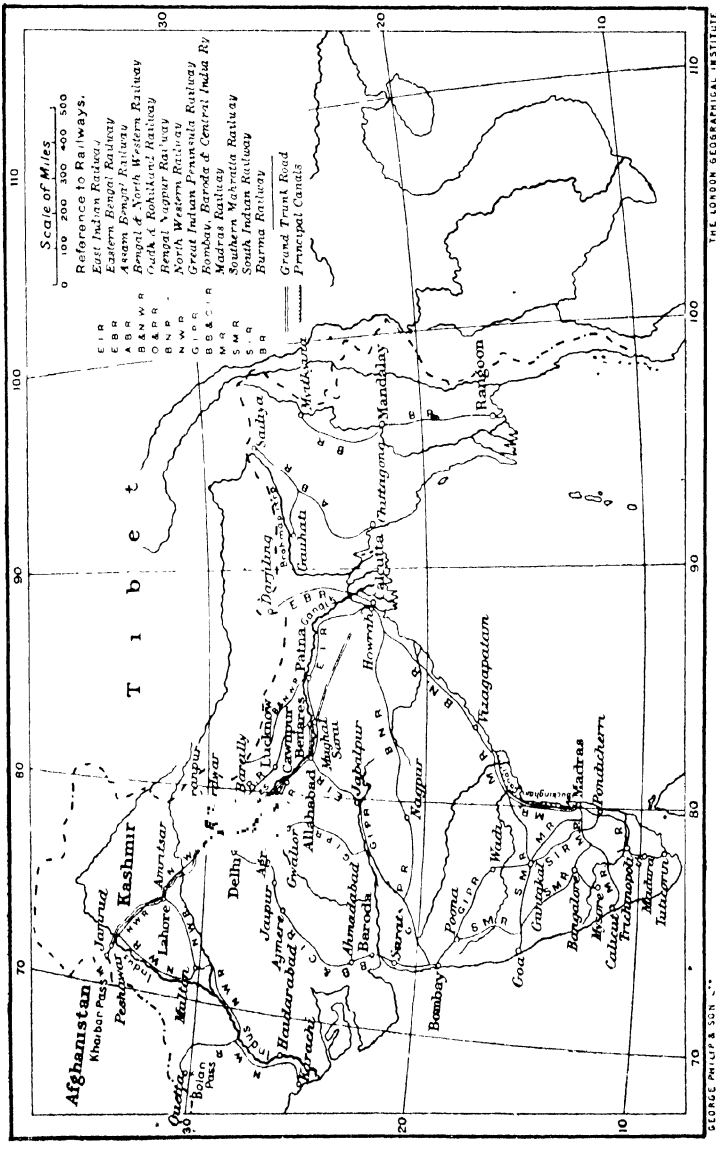
10. **The South Mahratta Railway**—1,600 miles—joins Poona and Bangalore, and serves the southern Deccan.

11. **The South Indian Railway**—1,200 miles—has numerous branches over the tail of the peninsula.

Connecting with Rangoon.—12. **The Burma Railway**—1,200 miles—extends from Rangoon along the valley of the Irawadi as far as Myitkyina.

There are many other smaller systems and branch lines. Most of the Indian railways are in the hands of Government.

Waterways.—Rivers and canals are largely used for navi-


Scale of Miles
0 100 200 300 400 500
Reference to Railways.
East Indian Railway
Eastern Bengal Railway
Assam Bengal Railway
Bengal & North Western Railway
Oudh & Rohilkund Railway
Bengal Nagpur Railway
North Western Railway
Great Indian Peninsula Railway
Bombay, Baroda & Central India Ry
Madras Railway
Southern Mahratta Railway
South Indian Railway
Burma Railway
Grand Trunk Road
Principal Canals
Tibet
Afghanistan
Kashmir
Jamrud
Peshawar
Khaibar Pass
Lahore
Amritsar
Multan
Quetta
Bolan Pass
Karachi
Hyderabad
Jaipur
Ajmer
Delhi
Agra
Gwalior
Allahabad
Lucknow
Cawnpore
Bareilly
Benares
Patna
Calcutta
Howrah
Darjiling
Gauhati
Sadiya
Mandalay
Rangoon
Moulmein
Chittagong
Jubbulpore
Nagpur
Vizagapatam
Ahmedabad
Baroda
Surat
Bombay
Poona
Madras
Pondicherry
Bangalore
Mysore
Calicut
Trichinopoly
Madura
Tuticorin
Goa
Cuttack
Wardha
Longmans, Green & Co London, New York, Bombay & Calcutta
GEORGE PHILIP & SON
THE LONDON GEOGRAPHICAL INSTITUTE

gation. Of the former, the **Ganges**, **Brahmaputra**, **Irawadi**, and the **Indus** are the most used. Of navigable canals, the **Buckingham Canal**—a salt-water channel parallel with the east coast—and the **Ganges Canal**, from Hardwar to Cawnpur, are the chief.

Roads.—The main roads of India are generally good, although those connecting the smaller towns and villages are still unmetalled. The **Grand Trunk Road**, from Calcutta to Peshawar, is over 1,500 miles in length.

TRADE.—Foreign.—The position of natural advantage which India commercially occupies, and the network of railways which link up all parts of the country with the chief ports, account for the extent of her trade; during the past ten years the annual value of the imports has grown from 92 to 130, and of the exports from 117 to 165 crores of rupees.

It has already been pointed out that India is essentially an agricultural country and that her mining and manufacturing industries are but little developed. Agricultural products are therefore those of which there will be a superfluous supply, and minerals and manufactured goods will be in demand. These facts account for the nature of the exports and imports, and a careful study of the following lists will show how trade depends upon industry.

The chief **exports** in the order of total value are **rice, wheat, raw cotton, oil-seeds, raw jute, manufactured cotton, opium, manufactured jute, hides and skins, tea, lac, raw wool, coffee, oils, indigo.**

The chief **imports**, also in order of total value, are **manufactured cotton, metals and hardware, sugar, machinery, oils, woollen goods, silk, apparel, provisions, chemicals, drugs &c., liquors, railway plant, glass,** and **spices.**

The value of the leading exports from the chief Indian ports is given below in crores of rupees :—

Rice—Rangoon ($13\frac{1}{2}$); Calcutta ($4\frac{1}{4}$); Madras ($1\frac{1}{10}$).
Wheat—Karachi (11); Calcutta ($3\frac{1}{2}$); Bombay ($2\frac{1}{2}$).
Cotton—Bombay (12); Madras ($2\frac{1}{2}$); Karachi ($1\frac{9}{10}$).
Oilseeds—Bombay (7); Calcutta ($4\frac{6}{10}$); Karachi ($1\frac{1}{2}$); Madras ($1\frac{3}{10}$).

Coasting Trade.—There are several small ports round the

coasts of India and Burma, and regular sailings take place between these and the five large ports of the Empire.

Trans-frontier Trade.—This is carried on chiefly with **Tibet** on the north, and with **Afghanistan** and **Persia** on the west. The trade with Tibet is carried on *via* Darjiling and through Kashmir, with Afghanistan through the Khaibar Pass, and with Persia through Quetta and the Bolan Pass. The lack of railways, however, hinders the development of trade on all India's frontiers.

GOVERNMENT.—The Indian Empire is a possession of Great Britain, and the **King of England** is its **Emperor.** Indian affairs in the British Parliament are under the special charge of the **Secretary of State for India,** who is assisted by a **Council of Advisers,** consisting chiefly of retired Indian officials of high standing.

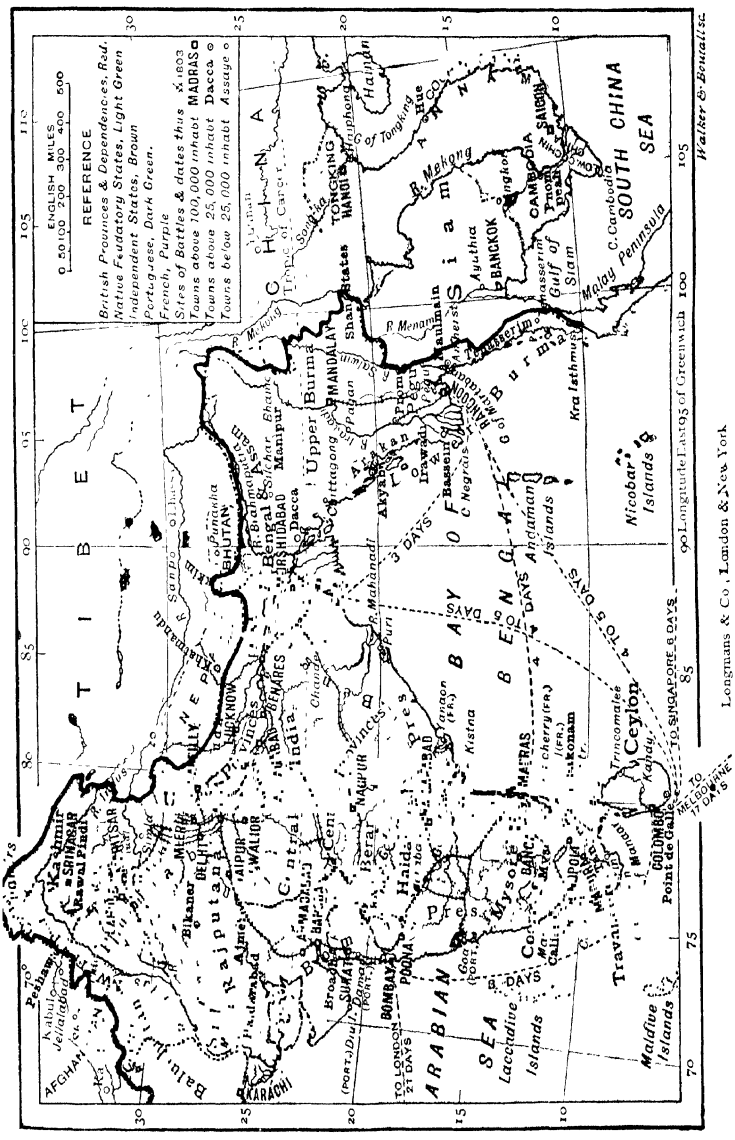
For direct rule in India, the Emperor appoints a **Viceroy,** who bears the official title of **Governor-General.** He presides over two Councils. The first is a kind of Cabinet, called the **Viceroy's Council,** and consists of six members, who are in charge of various departments, as well as himself and the **Commander-in-Chief,** who is an extraordinary member. The departments are for **Finance, Foreign, Home, Legislative, Revenue and Agriculture, Public Works, Commerce and Industry, Army,** and **Military Supply.** The second is the **Legislative Council,** for making laws and regulations, which consists at present of a varying number of members. The members of the Viceroy's Council belong also to the Legislative Council, but the rest of the members are nominated by the Viceroy, either permanently, or specially for the consideration of some particular Bill. There is a proposal on foot to make the Government more representative in character.

The Empire is divided for purposes of administration into provinces.

Two **Governors,** those of **Madras** and **Bombay,** are also nominated by the Emperor. All other rulers are appointed in India by selection from the most distinguished members of the Civil Service.

Five provinces are administered by **Lieutenant-Governors**—namely, **Bengal, Eastern Bengal and Assam, Burma, the United Provinces,** and the **Punjab.**

Provinces or districts of smaller population or less importance


ENGLISH MILES
0 50 100 200 300 400 500
REFERENCE
British Provinces & Dependencies, Red.
Native Feudatory States, Light Green
Independent States, Brown
Portuguese, Dark Green.
French, Purple
Sites of Battles & dates thus ⚔ 1803
Towns above 100,000 inhabt MADRAS
Towns above 25,000 inhabt Dacca
Towns below 25,000 inhabt Assaye
TIBET
CHINA
SOUTH CHINA SEA
ARABIAN SEA
BAY OF BENGAL
Burma
Siam
Upper Burma
Lower Burma
Bengal
Bhutan
Ceylon
Malay Peninsula
Kra Isthmus
Nicobar Islands
Andaman Islands
Laccadive Islands
Maldive Islands
Kashmir
Rawal Pindi
Peshawar
Kabul
Jellalabad
AFGHAN
Rajputana
Central India
Central Provinces
Berar
Haidar
Mysore
Travancore
Cochin
Bombay
Poona
Sumatra
Bikaner
Jaipur
Ajmer
Mhow
Gwalior
Lucknow
Benares
Dacca
Chittagong
Manipur
Shan States
Mandalay
Pegu
Rangoon
Bassein
Irawadi
Akyab
Tongking
Hanoi
Hue
Saigon
Cambodia
Phnom Penh
Bangkok
Ayuthia
Mekong
Menam
Kistna
Tanjore
Trincomalee
Kandy
Colombo
Point de Galle
Madras
Cheriyam
Kalkonam
Goa
Karachi
Bhamo
Sonpo
Khatmandu
Punakha
Sikhar
Bhanga
Tropic of Cancer
Tropic of Capricorn
Gulf of Siam
Gulf of Martaban
Tenasserim
Mahanadi
Puri
Tanjon
Kandy
Ceylon
TO LONDON 27 DAYS
TO SINGAPORE 6 DAYS
TO MELBOURNE 17 DAYS
90 Longitude East 95 of Greenwich
Walker & Boutall sc.
Longmans & Co., London & New York

are under a **Chief Commissioner.** Such are the **Central Provinces,** the **North-West Frontier Province, Baluchistan, Ajmere-Merwara, Coorg,** and the **Andaman and Nicobar Islands.**

Many states are under the control of their own princes or **Rajas.** In the largest of these, British interests are watched by a **Resident** or **Agent,** who communicates direct with the Government of India. Such are **Kashmir, Haidarabad, Mysore,** the **Central India Agency States,** and the **Rajputana States.** Smaller native states are controlled by the Local Government of the province in which they are situated.

There are now only two **independent states** in the Indian Empire; they are **Nepal** and **Bhutan.**

The **Foreign Possessions** situated within the limits of the Empire are insignificant. The **French** and **Portuguese** have a few settlements on the coasts of the peninsula—remnants of larger possessions in former times.

The **Laccadive Islands** are under the control of the Governor of Madras, and the **Maldive Islands** under the Ceylon Government. **Aden** is administered by the Governor of Bombay.

EXAMINATION PAPERS

A. 1. What are the chief races inhabiting the Indian Empire? In what parts of the country do they dwell?

2. Mention the chief forms of religion represented in India. What proportion of the people profess each religion?

3. What are the chief food-products of India? Where are they grown?

4. Where are the following languages spoken?—Uriya, Pushtu, Brahui, Canarese, Telugu?

B. 1. What are the most important mineral products of the Indian Empire? Where are they found, and to what extent are they worked?

2. Mention the chief fibrous plants cultivated, and say to what extent the raw product is manufactured.

3. By what railways would you proceed from Calcutta to Delhi, Delhi to Bombay, Bombay to Madras, Madras to Calcutta? Illustrate your answer by a map.

4. Give a complete list, with situations, of the Provinces, Protected States, Foreign Possessions, and Independent Territory in India.

PROVINCES.—1. BENGAL

1. **HISTORY.**—The first British possession in the lower Ganges valley was acquired by Clive in **1764**; the province extended east and west as new territory came under British power, and early in the nineteenth century included **Assam** and the area now known as the **United Provinces.** In **1836** these provinces were placed under a separate administration, and in **1874** Assam was cut off. In **1905** a further redistribution was made: Eastern Bengal was joined to Assam and raised to a Lieutenant-Governorship, and an exchange of districts was effected between Bengal and the Central Provinces. By these means Bengal was made less unwieldy for efficient administration.

2. **BOUNDARIES AND EXTENT.**—The boundaries of the province as now defined are:—

on the **east**: the Ganges as far as the Rajmahal Hills, and a line northwards from that point to the Sikkim-Bhutan boundary.
on the **north**:—Nepal as far as the River Gandak.
on the **west**:—the United Provinces and the Central Provinces.
on the **south**:—Madras and the Bay of Bengal.

The whole area thus included is about **141,000 sq. miles.**

3. **PHYSICAL FEATURES.**—**Relief.**—The surface of Bengal consists of an **alluvial plain** in the north, drained by the Ganges and a large network of tributaries, while Chota Nagpur and the south-west of the province generally is **hilly**—an extension of the Highlands of Central India. The highest point of these hills is **Parasnath,** in the valley of the Damodar, which is just below 4,500 ft. in height.

A low range—the **Rajmahal Hills**—runs north and south, causing the bend in the Ganges, where it turns south before entering the delta.

Rivers.—The province is watered by the lower courses of the **Ganges** and **Mahanadi,** both of which form large deltas.

The Ganges receives several important tributaries, the chief of which are the **Gogra, Gandak,** and **Kusi** from the north and the **Son** from the south. Three hundred miles from the sea the delta commences, and spreads over that extensive jungle-covered area known as the **Sundarbans.** The most important branch of the delta is the western one—the **Hugli**—on which stands

Calcutta and which receives the waters of the **Damodar** and **Rupnarain. Diamond Harbour** stands at its mouth, and it is protected seawards by Saugor Island, which does not, however, prevent a large bore from travelling up the river occasionally.

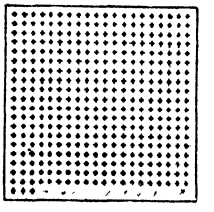
Only a small part of the course of the Mahanadi is in Bengal, but the whole of the delta is in the province, and so are the rivers **Brahmani** and **Baitarani**, which flow into the delta.

4. **CLIMATE AND RAINFALL.**—The Tropic of Cancer bisects the province, and the climate is therefore **tropical.** The proximity of the sea, and the abundant rain render the climate also **moist and equable.**

The **rainfall is regular**, and amounts on the average to nearly **60 inches** in a year.

5. **PEOPLE.**—The population is **540 lakhs, or 383 to the square mile,** *i.e.* second in density of all the provinces of India. 420 lakhs are Hindus and 90 lakhs are Muhammadans. The chief languages spoken are **Bengali** and **Hindi**, and **Uriya** in Orissa.

FIG. 52.—AVERAGE POPULATION OF A SQUARE MILE OF BENGAL.



6. **OCCUPATIONS.**—**Agriculture** is the employment of the vast majority of the people. The crops raised are **rice, jute, oil-seeds, tea, the poppy, sugar-cane, tobacco, indigo, millet,** and **wheat** in the north-west.

Manufactures are chiefly connected with agriculture—**jute** in the lower Ganges basin, **tea-making** near Darjiling, **opium** round Patna; **paper** and **soap** are made at Calcutta.

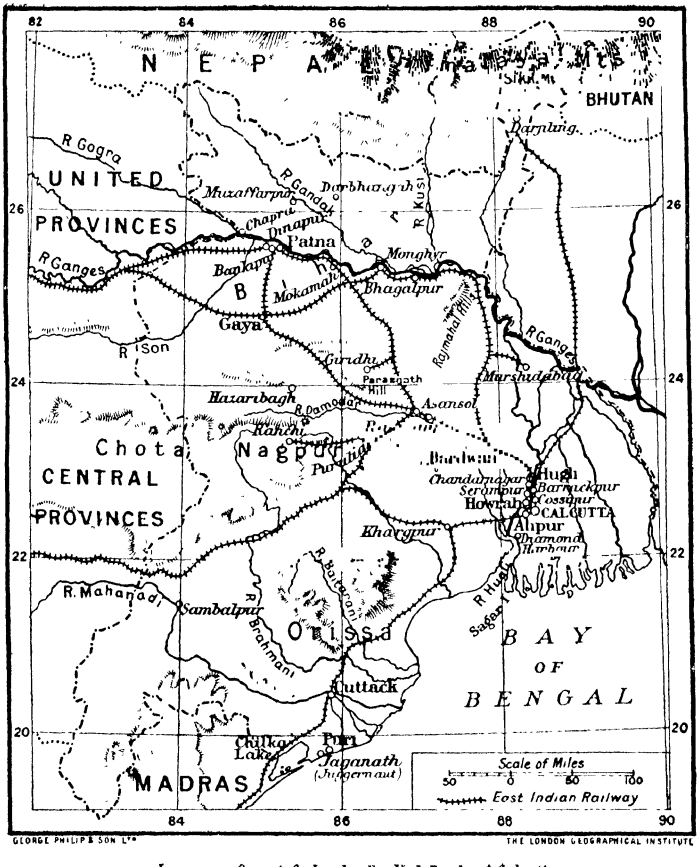
Mining.—**Coal** is dug at **Raniganj** and **Giridhi**; at the former place it is found associated with **iron. Saltpetre** is obtained in Bihar, and **mica** at Hazaribagh.

7. **GOVERNMENT.**—The province has been ruled by a Lieutenant-Governor since 1854. For purposes of local administration it is divided into **four divisions**—**Bengal proper** in the lower Ganges valley; **Bihar** in the north-west; **Chota Nagpur,** the west-central division, and **Orissa** in the south. The native states are **Sikkim** in the north, and a number of small states in Chota Nagpur and Orissa.

8. **TOWNS.**—Most of the large towns of Bengal have sprung

up on the banks of the Ganges and its numerous tributaries, but since railways have superseded river communication they have all been connected by rail. **Calcutta** (1,105,000) is the capital of Bengal, the winter capital of the Indian Empire, the second city

FIG. 53.—MAP OF BENGAL.



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in point of population in the British Empire, the first port and the second manufacturing city of India. It stands on the Hugli, about 86 miles from the mouth. The passage of the river is difficult owing to sand-banks and changes in the bed, and it is

only kept navigable at considerable cost. But the extent of the area tapped, and the immensity of the population supplied by this port, account for the way in which it retains the first place in trade and tonnage. The proximity of Calcutta to the Raniganj coal-fields has given a great impetus to its manufactures, and it is now the leading jute-manufacturing city in the world.

Howrah, on the west bank of the Hugli, is the manufacturing suburb of Calcutta, and the terminus of important railways. The population (158,000) is included in that of Calcutta given above. Other important suburbs are **Alipur**, with the residence of the Lieutenant-Governor; and **Cossipur**, with a Government gun factory.

Bengal is served by three chief railways, viz. the Bengal and North-Western north of the Ganges, the East Indian in the middle of the province, and the Bengal-Nagpur Railway in the south.

1. **Towns on the East Indian Railway.**—The first section of this line is from Howrah to **Bardwan**, 'a city of 73 villages,' and the stations passed are **Serampur**, with its paperworks, on the opposite side of the river to which stands **Barrackpur**, where the Viceroy has a residence; and **Hugli**, a river port of some importance, near which is the French settlement of **Chandarnagar**.

At Bardwan the line divides and forms a loop, the two lines reuniting at Mokamah. One branch follows the course of the Ganges, and the other—the main line—travels by a more direct route for Patna. On the former line stand **Bhagalpur** and **Monghyr**, both important centres of river traffic. The latter taps the coalfields of Raniganj and Giridih, forming a junction with the Bengal-Nagpur Railway at **Asansol**.

Patna, with **Bankipur** and the military station of **Dinapur**, is the second city of Bengal, and has a population of nearly 170,000. It was formerly of much greater commercial importance than at present, its position near the junction of several large rivers being one of considerable natural advantage. From Patna a branch of the railway runs to **Gaya**, the most important Buddhist centre in India, and a celebrated place of pilgrimage, with a population of 71,000.

2. **Towns on the Bengal and North-Western Railway.**—The most important of these are **Chapra**, a river port on the north

bank of the Ganges, **Muzaffarpur** and **Darbhanga,** centres of important agricultural districts.

3. The **Bengal-Nagpur Railway** has two branches — one travels westwards to the Central Provinces, the other southwards along the coast. The most important Bengal town reached by the former is **Sambalpur,** at the head of the Mahanadi river traffic. On the latter are **Cuttack** (51,000), the chief town of Orissa, standing at the head of the Mahanadi delta and renowned for its gold and silver filigree work; and **Puri** (50,000), just north of Chilka Lake, a city sacred to the Hindus, and visited annually by large numbers of pilgrims, especially at the time of the annual festival.

The chief towns of Chota Nagpur, **Purulia** and **Ranchi,** are now connected by railway. **Hazaribagh,** with deposits of mica, has not yet been connected.

Darjiling, the summer capital of the province, south of Sikkim, is approached by a mountain railway, 'a masterpiece of engineering skill.' From here magnificent views of the highest peaks of the Himalayas are obtained.

2. EASTERN BENGAL AND ASSAM

1. **HISTORY.**—The Chief Commissionership of Assam was united to the Rajshahi, Dacca, and Chittagong divisions of Bengal in 1905, and the whole made into a Lieutenant-Governorship, with headquarters at Dacca, which was the Muhammadan capital over three centuries ago. Assam came gradually into the Empire—the western portion as far back as the middle of the eighteenth century, when British rule in Northern India was in its infancy under Clive; and the remoter portions at intervals later, until, after the last annexation in 1865, the political boundary very nearly coincided with the geographical boundary, viz. the Himalaya Mountains on the north, and the North Burma hills on the south.

2. **BOUNDARIES AND SIZE.**—The extent of the province is **106,500 sq. miles,** Eastern Bengal being slightly larger than Assam, and it is roughly triangular in shape—bounded **on the north** by Tibet and Bhutan, **on the west** by Bengal and the Bay of Bengal, and **on the south-east** by Burma.

3. **PHYSICAL FEATURES.—Relief.**—Eastern Bengal and Assam occupies the eastern and narrower end of the great plain of Northern India. The western portion of the province is low and level, but in proceeding eastwards the **plain** divides into two **valleys**—those of the Brahmaputra and Surma Rivers—which are separated by a tongue of hilly land running east and west and known in different parts as the **Garo, Khasi,** and **Jaintia Hills.**

The northern boundary of Assam is traversed by offshoots from the **Himalayas,** and the hills of Upper Burma extend into the province on its south-eastern border. The chief ranges here are the **Patkoi Mountains** and the **Naga** and **Lushai Hills.**

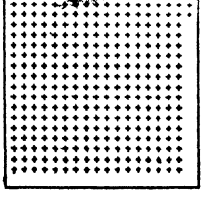
The **coast-strip** in the Chittagong Division is backed by the Chittagong and Tipperah hill ranges.

Drainage.—The province is drained by the **Brahmaputra** and its numerous tributaries, of which the chief are the **Subansiri,** the **Manas** and the **Tista** from the north, and the **Surma** from the east, which flows into the **Meghna,** the great branch of the Ganges delta on the east.

4. **CLIMATE AND RAINFALL.**—The climate varies with the locality and the elevation. On the plains in the east the climate is similar to that of Bengal—**warm and damp.** The Brahmaputra valley, being further inland, is more subject to extremes, although it is neither so hot in summer, nor so cold in winter, as in the Punjab to the north-west of India.

The **rainfall is everywhere abundant** during the monsoon months, and parts of Assam, especially the Khasi Hills, have the heaviest rainfall in the world.

FIG. 54. — AVERAGE POPULATION OF A SQUARE MILE OF EASTERN BENGAL AND ASSAM.

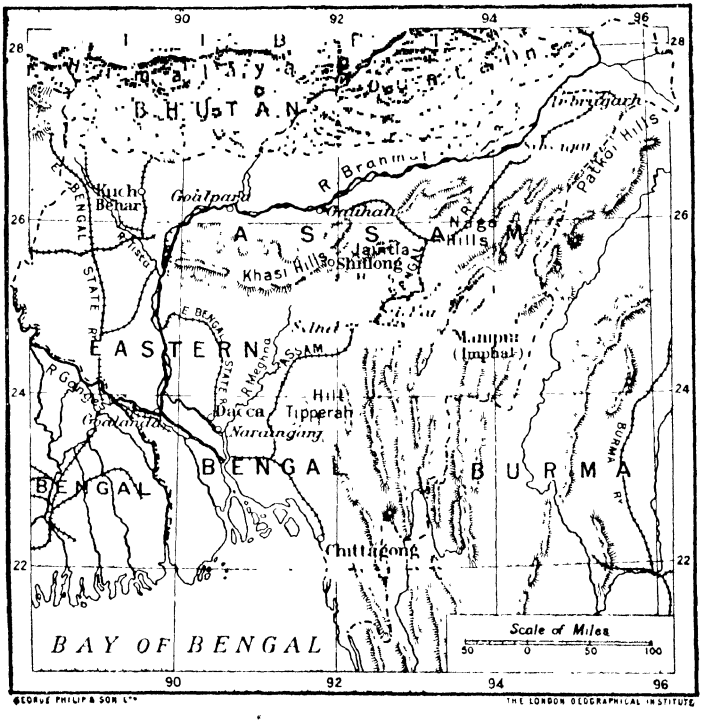


5. **PEOPLE.**—The total population is about **310 lakhs,** of whom 250 lakhs belong to Eastern Bengal, which is four times as densely populated as Assam. The average density of the population of the whole province is 291 to the square mile. **Muhammadans** form the bulk of the population in Eastern Bengal, but **Hinduism** is the religion of the people of the Brahmaputra valley, and many of the hill tribes are **fetish worshippers.** Proximity to Burma

accounts for the large numbers of **Buddhists** in the Chittagong Division.

6. **OCCUPATIONS.**—In Eastern Bengal the great majority of the people live by cultivating the soil, and the chief productions are similar to those of Bengal, **jute, tea,** and **rice.** In Assam, only the valleys are cultivated, tea and rice being the most

FIG. 55.—MAP OF EASTERN BENGAL AND ASSAM.



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important crops. A large portion of the country consists of forests. **Rubber** is extracted from the india-rubber tree, and **timber** is cut for export. Cocoons are collected in the forests, and **tussar** or **Assam silk** is woven.

Coal is mined in small quantities in the hills south of the Brahmaputra.

The **manufacture of jute** and **tea** employs large numbers of people, and there is a little **shipbuilding** carried on at Chittagong.

GOVERNMENT.—The province is under a Lieutenant-Governor, who is assisted by a Legislative Council. The head-quarters of the province are at Dacca.

There are three native states of importance :—**Manipur** lies in the mountainous region on the borders of Burma. The capital is **Imphal** (67,000). **Hill Tipperah**, another mountainous state, lies immediately to the north of the Chittagong Division. **Kuch Behar** is a small state, not far from the south-western border of Bhutan.

TOWNS.—The province is singularly deficient in large towns, but there are many which are becoming commercially more important, and are consequently growing in population.

Dacca (90,000) is a smaller city than it was two hundred years ago, when it was the capital of the eastern Muhammadan kingdom, but it has gradually increased during the past fifty years. The city lies about 10 miles above **Narainganj**, its port, at the mouth of the Brahmaputra. It has a considerable jute manufacture.

Chittagong had, at the last census, a population of only 22,000, but it is a rising port with considerable trade. The produce of Assam comes down either by rail to Chittagong or to Calcutta by the Brahmaputra. The exports are therefore tea and timber from Assam, and rice and jute from Eastern Bengal.

The river traffic on the Brahmaputra has given growing importance to several river ports on its banks. The chief are **Goalpara, Gauhati, Sibsagar,** and **Dibrugarh. Goalando** stands at the junction of the Brahmaputra and Ganges.

In Southern Assam, **Shillong**, a sanatorium; **Sylhet**, near Cherrapunji, the wettest place in the world; and **Silchar**, the centre of the Cachar tea-planting industry, are the chief towns, but none has a population of 20,000.

8. THE UNITED PROVINCES OF AGRA AND OUDH

HISTORY.—The territory included within the province of Agra originally formed part of the Bengal Presidency, but in **1836** efficient administration called for its separation, and it was then

raised to the status of a Lieutenant-Governorship under the name of the **North-Western Provinces.** At that time this name was very appropriate, for the province formed the north-western limit of the British Empire in India. But after the annexation of the Punjab in 1849 the name was a misnomer, so in **1901,** when the North-West Frontier Province was separated from the Punjab, the more historical name associated with the ancient kingdoms of Agra and Oudh was adopted.

The kingdom of Oudh has been under British administration since **1856**, and for twenty-one years was administered separately by a Chief Commissioner. But as it lies entirely within the province of which it now forms a part, the two were united under one administration in **1877.**

BOUNDARIES AND EXTENT.—The area is slightly larger than that of Eastern Bengal and Assam, viz. **112,000 sq. miles.** It has natural boundaries along two sides—namely, the Himalaya Mountains on the north, and the Jumna on the west. The territories which surround it are:—**Tibet and Nepal** on the north, the **Punjab and Rajputana** on the west, **Central India** on the south, and **Bengal** on the east.

PHYSICAL FEATURES.—**Relief.**—The only mountainous portion of the United Provinces is in the north-west, where a considerable area between Nepal and the Punjab penetrates far into the interior of the Himalaya system. Many snow-clad peaks reach a height of over 20,000 ft., **Nanda Devi**, which is near the sources of the Ganges, Indus, Sutlej, and Brahmaputra, being 25,600 ft. above sea-level. Lying south of the main range and separated from it by the **Dun** Valley is the low range of the **Siwaliks**, about 2,000 ft. in height.

But the major portion of the provinces forms a part of the great **plain** of Northern India, which is separated from the Himalayas by densely-wooded tracts.

DRAINAGE.—The United Provinces is one of the best watered districts in India, and is, consequently, area for area, the most densely populated part of the whole country. The Jumna, and later the main stream of the Ganges, correspond roughly with the southern boundary, and the rivers which combine to form the main stream flow in more or less parallel courses across the plain from north-west to south-east. Taken in order they are

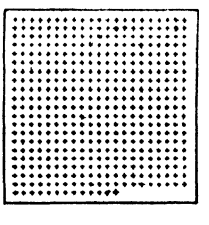
the **Jumna, Ganges, Ramganga, Gumti,** and the **Gogra** with its two feeders the **Sarda** and **Rapti.** The only stream from the south which drains a considerable area is the **Betwa,** a tributary of the Jumna.

CLIMATE AND RAINFALL.—The climate is less equable than that of Bengal, yet not so extreme as in the Punjab. The **summer is hot,** especially before the monsoon, but the **winter** months are **cold.** The United Provinces are only just inside the monsoon region, and the **rainfall** is consequently **not** so **heavy** as it is further east. But whatever deficiency may exist in the rainfall is compensated for by the rivers, and the **irrigation channels** which have been made.

PRODUCTS.—The United Provinces stand first in India in the production of **millets** and similar **food grains,** and **sugar-cane.** They stand second only to the Punjab in the production of **wheat.** Other very important crops are the **poppy, rice, oil-seeds, cotton,** and **indigo. Tea** is grown in the Dun, and on the lower hill slopes.

PEOPLE.—The United Provinces have the highest density of population of all the provinces, viz. **433 to the square mile.** The total population is **485 lakhs,** of which 413 lakhs are Hindus and 69 lakhs Muhammadans. The language of the majority of the people is **Hindi.**

FIG. 56.—AVERAGE POPULATION OF A SQUARE MILE OF UNITED PROVINCES—AGRA AND OUDH.



As in other parts of India, the inhabitants of the United Provinces live mostly in villages, but there are seven cities with a population of over a lakh—more than in any other province. They are **Lucknow, Benares, Cawnpur, Agra, Allahabad, Bareilly,** and **Meerut.**

OCCUPATIONS.—The chief industry is **agriculture**; the crops are those enumerated above under 'Products.'

There are some important **manufactures.**

Cotton goods are made at Cawnpur, and **carpets** at Mirzapur.

Leather goods are also produced on an extensive scale at Cawnpur.

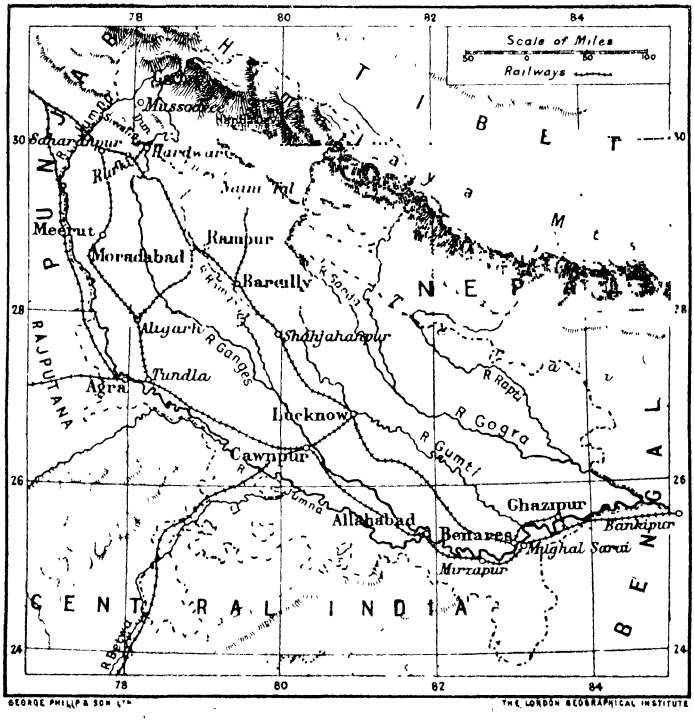
Metalwork is indigenous to Benares and Moradabad.

Sugar, indigo, and **opium** are manufactured. The centre of the Government **opium** monopoly is at **Ghazipur.**

Tea is grown and manufactured in the Dun.

GOVERNMENT.—The United Provinces are ruled by a Lieutenant-Governor, who is assisted by a Legislative Council. The headquarters of the Government are at Allahabad in the cool

FIG. 57.—MAP OF THE UNITED PROVINCES.



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months and at Naini Tal in the summer. The provinces have nine divisions, as compared with five in the Punjab—the larger number being occasioned by the greater population.

There are two native states, both in the north-west. **Garhwal** is a mountain state, bordering Tibet on the north and the Punjab Hill states on the west. **Rampur**, further south, is a smaller state.

TOWNS.—Most of the large cities are on the banks of the Ganges and its tributaries, as these were formerly the chief commercial highways, and the Ganges has always been regarded by the Hindus with great veneration. They are now, however, connected by railway, the main lines which run through the provinces being the East Indian, the Oudh and Rohilkand, and, in the west, the North-Western Railway. Commencing at Bankipur, which is just inside the Bengal border, the **East Indian Railway** follows the course of the Ganges, on its south bank, as far as Cawnpur, a distance of nearly 350 miles. The chief towns passed on this line are **Mirzapur, Allahabad, Cawnpur, Tundla** (the junction for **Agra**), and **Aligarh**.

Mirzapur (80,000) is an important centre of the cotton trade, and has manufactures of carpets and rugs.

Allahabad (172,000) is the capital, and owes its name and its importance to its position at the junction of the two sacred streams—the Ganges and the Jumna. As a sacred city it has an important religious fair, held annually, and as a commercial town it is a distributing rather than a manufacturing centre.

Cawnpur (197,000) is one of the most important manufacturing and railway centres in India. Besides the East Indian, the following railways run into Cawnpur: the Bengal and North-Western and the Oudh and Rohilkand from Lucknow, the Bombay, Baroda and Central India from Agra, and the Great Indian Peninsula Railway from Jhansi. The town has very considerable manufactures of leather and leather goods—boots, saddlery, &c.—and of cotton fabrics.

Agra (188,000) was formerly one of the Moghal capitals, and now again gives its name to the province. It is a city of considerable trade, but it owes its fame to its magnificent buildings, erected chiefly by Akbar and the great king builder, Shah Jahan. The Taj Mahal, which the latter raised as a tomb for his wife, is one of the most beautiful buildings in the world—'a dream in white marble.'

Aligarh is known as the centre of Muhammadan learning in India.

The **Oudh and Rohilkand Railway** runs from Moghal Serai, where it joins the East Indian, to Saharanpur, its junction with the North-Western Railway. The chief stations passed are

Benares, Lucknow, Shahjahanpur, Bareilly, Rampur, Moradabad, Hardwar, and **Rurki.**

Benares (209,000) is a city sacred to the Hindus, and containing many temples. Large numbers of pilgrims visit the city annually. There are brass manufactures of some importance.

Lucknow (264,000), the chief city in Oudh, and the most populous in the United Provinces, is about 190 miles from Benares by rail. It has several buildings of historic interest, chief among which is the Residency, which withstood a siege of three months in the Mutiny of 1857. Its manufactures are local and unimportant.

Shahjahanpur (76,000) is the centre of a thriving sugar industry.

Bareilly (131,000), although one of the largest towns in the province, is not of great commercial importance.

Rampur (79,000), the capital of the native state of the same name, is the place at which the celebrated shawls were first made.

Moradabad (75,000) has manufactures of brassware and sugar.

Hardwar is a small town, but is an important place of Hindu pilgrimage. It stands on the Ganges at the place where it enters the plain.

Rurki, only a few miles from Hardwar, has a large engineering college.

At **Saharanpur** (66,000) the Oudh and Rohilkand Railway joins the North-Western system.

The North-Western Railway runs from Saharanpur, *via* Meerut and Ghaziabad, to Delhi.

Meerut (119,000) is a large military station. The Mutiny broke out here in 1857.

The United Provinces have several flourishing hill-stations.

Naini Tal, connected nearly the whole way by rail with Bareilly, is the summer capital.

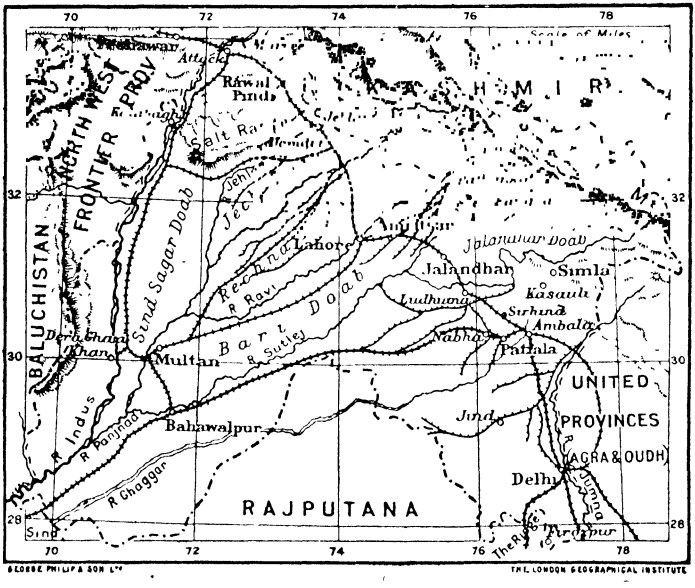
Mussooree, above the Dun, is reached from Saharanpur.

4. THE PUNJAB

HISTORY.—The position of the Punjab on the line of march of armies invading India through the passes of the north-west

has had considerable influence on its history. Alexander of Greece invaded the country in 327 B.C., and during the past thousand years the Ghazni, Ghori, and Moghal conquerors have come through this province. The Punjab has also been the region of division between the Brahmanic religion of Hindustan and the Muhammadanism of south-west Asia. This may have accounted for the rise here of the 'monotheistic form of Hinduism'—the religion of the **Sikhs**—which was founded by Guru

FIG. 58.—MAP OF THE PUNJAB



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Nanak in 1469. The Sikhs became a strong nation, and under Ranjit Singh, the 'Lion of the Punjab,' attained their greatest power. The kingdom of Ranjit Singh was annexed by the British in **1849**, the territory east of the Sutlej having come under British rule early in the nineteenth century.

BOUNDARIES AND SIZE.—The Punjab boundaries run more or less north and south on the eastern and western sides, but Kashmir on the north and Rajputana on the south run so

far into the province as to bring their borders within 200 miles of each other. The River Sutlej and a line from Attock to Delhi thus form two diagonals which cross close to Lahore.

The Punjab is surrounded by the **United Provinces** of Agra and Oudh on the east, **Kashmir** on the north, the **North-West Frontier Province** and **Baluchistan** on the west, and **Sind** and **Rajputana** on the south. Natural boundaries are the Himalaya Mountains on the north, the Jumna on the east, and the Indus on the west. The **area** of the province (including native states, 36,500 sq. miles) is nearly **134,000 sq. miles.**

PHYSICAL FEATURES.—The major portion of the surface consists of a great, almost unbroken plain. In the north the territory of the Punjab extends into the Himalaya system, and from the great range the land resembles a low plateau, shelving down to the plains. In the north-west the **Salt Range** extends from the vicinity of Jehlam to Kalabagh on the Indus, and in the south-east **the Ridge**—the northern extension of the Aravalli Hills—runs as far as Delhi.

The great feature of the province is the River **Indus**, with its five tributaries (from which the name Punjab is derived) extending like the fingers of a hand across the province. The united stream which eventually joins the Indus is known as the **Punjnad**, and is made up of the **Chenab** and the **Sutlej**. The former receives the **Jehlam** River on the right bank and the **Ravi** on the left, while the Sutlej brings the waters of the **Beas**.

The doabs between these streams are naturally very fertile, but owing to the absence of small tributaries they have to be irrigated. The names given to the doabs are :—

(1) Between the Indus and Jehlam—the *Sind Sagar* Doab.
(2) Between the Jehlam and Chenab—the *Jech** Doab.
(3) Between the Chenab and Ravi—the *Rechna** Doab.
(4) Between the Ravi and Beas—the *Bari** Doab.
(5) Between the Beas and Sutlej—the *Jalandhar* Doab.

The eastern part of the province is watered by the **Jumna**, and to the south of the Sutlej, and roughly parallel with it, is the **Ghaggar**, a considerable stream which, rising in the Simla Hills,

* It will be observed that these names are formed by the combination of the initial sounds of the names of the rivers between which they lie.

eventually loses itself in the Rajputana Desert. Large areas in the south-east and south-west are unwatered and consequently unproductive.

CLIMATE AND RAINFALL.—The Punjab is outside the real monsoon area, and what rains it gets during the summer monsoon are due to a deflection westwards of the current after striking the Himalayas. Hence the rainfall is low—about **20 inches** at Lahore, and less further west and south. This absence of rain, or other moisture, and the consequent dryness of the atmosphere, together with the distance from the sea, combine to make the climate more extreme than in other parts of India. The summers are very hot and the winters cold, at night even frosty.

IRRIGATION.—The low rainfall and the absence of small streams have in the past rendered this fertile province unproductive except along the banks of the rivers. This has led to the construction of an elaborate system of canals, and to-day no country in the world is so well irrigated as the Punjab. The cost of construction of the canals has been enormous, but so beneficial are they that Government secures a good revenue as return on the outlay.

The canals are of two kinds—(1) **perennial** canals, which draw their waters from the rivers where they leave the mountains and enter the plains, and whose supply is therefore practically inexhaustible; and (2) **inundation** canals, which are cut direct from the main stream and are only practicable when the river is in flood. The chief perennial canals are:—

(1) The *Jehlam Canal*, which irrigates the Jech Doab.

(2) The *Chenab Canal*, which irrigates the Rechna Doab.

(3) The *Bari Doab Canal*, which derives its waters from the Ravi.

(4) The *Sirhind Canal*, fed by the waters of the Sutlej, and irrigating an extensive area to the east of that river.

(5) The *Western Jumna Canal*, deriving its supply from the river Jumna, and irrigating a large part of the Eastern Punjab.

The inundation canals are chiefly constructed from the Lower Sutlej and Chenab and that part of the Indus immediately above its junction with the Panjnad.

Further schemes are in progress for watering those parts of the province not yet irrigated, especially the Sind Sagar Doab.

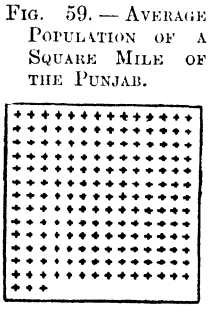
PRODUCTIONS.—The chief cultivated crops are **wheat** and **barley,** especially the former, and the Punjab is fast becoming one of the great wheat-producing countries of the world. Both wheat and barley are cold-weather crops. The chief hot-weather crops are **millets, cotton, tobacco, sugar-cane,** and **rice. Tea-making** is an important industry in the Kangra Valley. Forests are preserved in the hills, and the chief timber is **deodar** (cedar).

Minerals are unimportant except **salt,** which is dug in large quantities in the Salt Range. A little **coal** is found in the valley of the Jehlam at Damdot. The mine is worked by the North-Western Railway.

COMMUNICATIONS.—The Punjab shows clearly that railway expansion is an index to commercial progress. The **North-Western Railway** spreads over practically the whole province. The first line laid down was that connecting up Lahore and Peshawar with Delhi, and so with the rest of India. The development of Punjab trade and the rise of Karachi called for the construction of the line from Lahore to Karachi, which is now in process of being doubled to cope with the increased trade. The construction of the Punjab canals has led to the laying down of railways in each of the doabs, and to-day a map of the North-Western Railway bears a striking resemblance to the map of the Indus and its tributaries.

PEOPLE.—The population of the province and native states was, in 1901, little short of 25 millions, of whom nearly one-half were Muhammadans and just over 2 millions Sikhs. The average population is thus **185 to the square mile.** The language of the educated classes is **Urdu,** but **Punjabi** is spoken by the great majority of the people.

FIG. 59.—AVERAGE POPULATION OF A SQUARE MILE OF THE PUNJAB.



OCCUPATIONS.—**Agriculture** is the employment of the bulk of the population. Manufactures are not yet developed to any extent, but indigenous industries are important. **Gold and silver embroidery, jewellery,** and **ivory work** are carried on at Delhi; **cotton-weaving** at Ludhiana; **carpets** at Amritsar; and **pottery** at Multan. Lahore, Amritsar, and Delhi are important commercial centres.

GOVERNMENT.—The Punjab has been under the control of a Lieutenant-Governor since 1859. He is assisted by a Legislative Council, and the province is divided for purposes of administration into five Commissionerships.

There are thirty-four native states, of which **Bahawalpur** and the Phulkian states of **Patiala, Nabha,** and **Jind** are the most important.

TOWNS.—Most of the large towns are connected with the North-Western Railway.

Delhi, in the south-east of the province, is the most historic city in the north of India and the most populous city in the Punjab (208,000). It is also a great commercial town and an important distributing centre, being about equally distant from the ports of Bombay, Calcutta, and Karachi. No fewer than six railways enter the city. Its industries are important, its art products being known all over the world. The present city is comparatively modern, but the ruins of many former Delhis may be traced in the neighbourhood. Delhi is a city of magnificent buildings, the most famous of which are the Jumma Musjid, the palaces in the Fort, and the tombs of emperors in the immediate vicinity. The Qutb Minar, 10 miles distant, was built in 1206, and is still in the most remarkable state of preservation.

Delhi formerly belonged to the United Provinces. It was transferred to the Punjab after the Mutiny of 1857.

Ambala (80,000) is an important military cantonment and the changing station for Simla, the summer capital of India and of the Punjab Government.

Ludhiana (50,000) is an important native city, with a growing cotton industry.

Amritsar (162,000) is next reached. This is the centre of Sikhism and the location of the Golden Temple. The town has important manufactures of carpets and an important market for manufactured cotton and other goods.

Lahore (203,000) is the capital, and stands near the Ravi, at the centre of the province. Commercially and industrially the city is growing rapidly, and it is also the seat of a University. The Fort is associated with the name of Ranjit Singh, the great Sikh ruler. From Lahore the railway runs north and south.

Multan (87,000) is the only Punjab town of importance on the southern line. It is a considerable trade centre.

Rawal Pindi is the chief town on the northern line. It is the most important military centre in Northern India. The population is 88,000.

Other large military stations are **Attock**, **Jalandhar**, and **Ferozpur**, the last mentioned with an arsenal.

The Punjab has several large hill-stations. The most important are **Simla**, referred to above; **Kasauli**, with its Pasteur Institute, also reached from Ambala; **Dalhousie**, from Amritsar and Pathankot; and **Murree**, from Rawal Pindi.

Some towns in the west of the province have risen on account of trans-frontier caravan trade: such are **Kalabagh** and **Dera Ghazi Khan.**

5.—THE NORTH-WEST FRONTIER PROVINCE

This province was created in the year 1901, when several frontier agencies extending from Chitral on the north to Waziristan on the south, which had previously been under military control, were united with the frontier districts of the Punjab and placed under civil administration.

BOUNDARIES AND AREA.—The province is long and narrow; it runs from north to south, and is irregular in shape. The Indus forms the boundary for a considerable distance on the west. The surrounding states are Kashmir, the Punjab, Baluchistan, and Afghanistan. The **area** is **16,500 sq. miles.**

PHYSICAL FEATURES.—The province is very mountainous, with river valleys, through which flow tributaries of the Indus running from east to west.

The **Hindu Kush Mountains** in the north attain a height of nearly 16,000 ft. The chief streams here are the **Gilghit** and the **Chitral.**

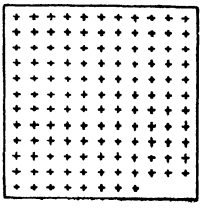
West from Peshawar is the **Safed Koh Range**, as high as the Hindu Kush, with the **Kabul River** to the north and the **Kuram** to the south.

The **Gomal River** separates the North-West Frontier Province from Baluchistan.

CLIMATE AND PRODUCTIONS.—The climate is, in the

lower districts, similar to that of the Punjab. In the more mountainous parts it is much colder, especially in winter. The productions, too, are similar to those of the Punjab, but they are not yet commercially important. **Fruits** are widely grown and ripen well.

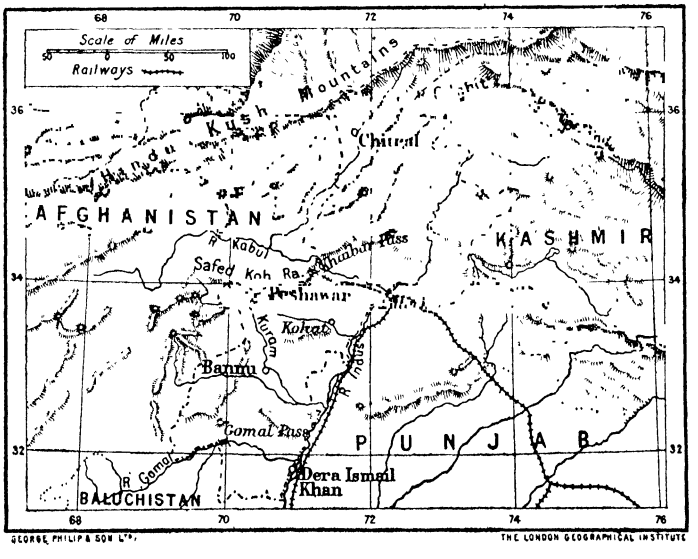
FIG. 60. — AVERAGE POPULATION OF A SQUARE MILE OF THE NORTH-WEST FRONTIER PROVINCE.



PEOPLE. — The inhabitants number **2,125,000**, or an average of 129 to the square mile, of which all except about 200,000 are **Muhammadans.** Most of the people are **Pathans** and speak **Pushtu.** They are mostly engaged in agriculture.

TRADE. — The main line of the North-Western Railway runs from Attock on the Indus to Peshawar, but a branch of the same railway runs along the east bank of the Indus, and goods enter the Punjab by

FIG. 61.—MAP OF THE NORTH-WEST FRONTIER PROVINCE.



Longmans, Green & Co., London, New York, Bombay & Calcutta.

crossing the river. There is considerable road trade along the river valleys into Afghanistan.

GOVERNMENT.—The province is under a **Chief Commissioner**, and its affairs are now controlled by the Government of India direct, instead of through the Punjab Government, as was the case with all frontier matters before 1901.

TOWNS.—Most of the towns are important as military outposts.

Peshawar (95,000) is the headquarters of the Local Government, is a large military station, and commands the Khaibar Pass. It is the centre of considerable trade, and has manufactures of wax-cloth.

Dera Ismail Khan, on the Indus, is the destination of the trade through the Gomal Pass.

The chief military outposts are **Bannu**, **Kohat**, and **Chitral**.

6.—BOMBAY PRESIDENCY

HISTORY.—The island of Bombay was the first Indian territory to come into the possession of the English Crown, it having been given as part of her dowry to the Portuguese Princess Catharine on her marriage with Charles II. in 1662. Six years later the island was handed over to the East India Company. Bombay was at this time comparatively unimportant, Surat for several years before and after this date being the centre of British enterprise on the west coast.

The Presidency came gradually under British power during the nineteenth century—a fresh portion of territory being acquired and added after each of the three Maratha wars. Sind was conquered in 1843, and although geographically distinct from the remainder of the Presidency, it was placed under the administration of Bombay.

Bombay has always gained considerable importance from its position. Being on the west of the peninsula it was early visited by Europeans, and Diu, Daman, and Goa are still in Portuguese possession—a remnant of a much larger dominion. The city of Bombay has a large number of Parsis (the descendants of Persian immigrants), famous for their trading ability.

BOUNDARIES AND EXTENT.—The Bombay Presidency is long and narrow, extending over a thousand miles from north

to south, and widest on the 21st parallel, where, including the peninsula of Kathiawar, the width is nearly 400 miles. The total area is **188,000 sq. miles,** of which Sind occupies a quarter and native states nearly half the remainder.

The sea bounds the Presidency on the west, but on the land side the only natural boundaries are a few small streams.

The provinces and states lying on the borders are—

Sind—Baluchistan (west); N.W.F. Province, Punjab, and Bahawalpur (north); Rajputana (east).

Lower Presidency.—On the east, commencing in the north, Central India, Central Provinces, Haidarabad and Mysore States, and Madras.

PHYSICAL FEATURES.—The Bombay Presidency is divided by the two great openings of the sea—the **Rann of Cutch** and the **Gulf of Cambay**—into three parts:—

1. **Sind,** north of the Rann of Cutch. This part of the province consists of a **sandy plain,** undiversified over the whole area, except where the **Indus** travels, or where the presence of water has caused a town or village to spring up. The lower course of the Indus is remarkable for its want of tributaries, and in its lower course the Indus Valley may be compared with the valley of the Nile. The river does not, however, overflow its banks and fertilise Sind, as the Nile fertilises Egypt. Sind is outside the monsoon area.

2. The **Kathiawar Peninsula,** between the Rann of Cutch and the Gulf of Cambay. Portions of this peninsula are hilly, and there are many small streams. The southern portion gets much more rainfall than the northern, the Rann of Cutch becoming quite dry in places during the hot season.

3. The **Deccan** portion of the Presidency, south of the Gulf of Cambay. In the north are the ends of the **Vindhya** and **Satpura Ranges** and the lower courses of the **Tapti** and **Narbada.** From north to south run the **Western Ghats.** This range naturally divides the surface into three natural regions—the **coast-strip**; the **mountain ridge**; and the **plateau** strip east of the ridge. The whole of this portion of the province is well watered, many streams (those to the west being very short) rising in the Ghats. The largest streams are the upper courses of the **Godaveri, Kistna,** and **Bhima.** The chief passes in the Ghâts are near

Bombay, **Thal Ghat** and **Bhor Ghat**; both are railway routes, one north-east, the other south-east, from Bombay.

CLIMATE AND RAINFALL.—In the southern portion of the Presidency the proximity to the sea of the coast-strip and the elevation of the interior render the climate free from extremes, although, in the rains especially, it is uncomfortably humid near the coast. The rainfall is generally abundant—about 75 inches at Bombay—and is much higher on the west than on the east of the Ghats.

In Sind the climate is extreme: very hot in summer, and cool (even cold during the night) in winter. This is due very largely to the absence of moisture or any other equalising influence. The dry sand absorbs heat rapidly during the day-time, and radiates it as quickly during the night. The annual rainfall in Sind is only about 4 inches, monsoon rains being practically absent, owing to the absence of lateral mountain ranges to condense the moisture.

PRODUCTIONS.—Vegetable.—Trees are everywhere important. In Sind the **date palm** is invaluable to the people, and the **babul** grows along the banks of the Indus. The trees of the Western Ghats and Deccan plateau have considerable commercial value, **teak** and **sandalwood** being the most valuable. The **coco-nut palm** is abundant along the coast.

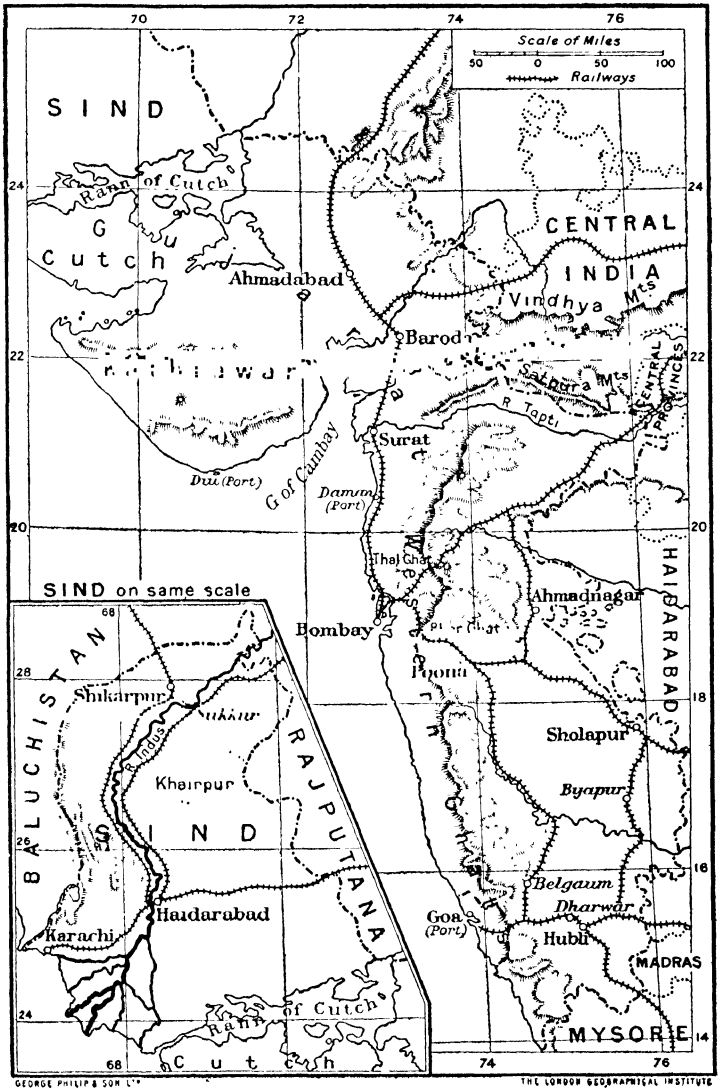
Of cultivated plants, **wheat** and **barley** are grown on irrigated lands in the winter in Sind, **millets** being the crop in the summer. Along the wet coast strip, **rice** is the most important cereal, and this grain is also grown on the tableland. But the chief crops of the Bombay Deccan are **wheat** in the north and **cotton** in the south, the famous 'black soil' suiting this latter crop to perfection.

Animal.—Gujarat is the only part of India where the **lion** is found.

MINERAL.—Gold is mined in the neighbourhood of Dharwar, but the minerals of the Presidency are unimportant.

PEOPLE.—The total population of the Presidency is **25½ millions**, an average of 135 per square mile, but of these only about 3,000,000 are in Sind, so that the density of the remainder of the province is 157 per square mile. Four-fifths of the people are **Hindus**. Bombay city contains half the **Parsis** in India. The

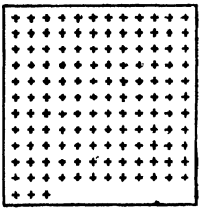
FIG. 62.—MAP OF THE BOMBAY PRESIDENCY.



Longmans, Green & Co. London, New York, Bombay & Calcutta.

languages chiefly spoken are **Marathi** and **Gujarati** in the peninsular part of the Presidency, and **Sindhi** in Sind.

FIG. 63.—AVERAGE POPULATION OF A SQUARE MILE OF THE BOMBAY PRESIDENCY.



OCCUPATIONS.—As in the rest of India, **agriculture** is the most important industry. (For cultivated crops see above.)

The **manufacture of cotton goods** is becoming every year more considerable, many mills having been erected at Bombay, Ahmadabad, and other towns, for **weaving** the **cotton** of the province. The chief indigenous industries are those of **silk-weaving, embroidery,** and **paper-making.**

TRADE.—The Presidency is well supplied with railways, which radiate from Bombay. The **Bombay, Baroda and Central India Railway** travels along the west coast, *via* Surat, to Baroda, Ajmere, and Delhi. The **Great Indian Peninsula Railway** has two lines; one travels north-east to Jhansi, where it divides—a northern branch going to Delhi and an eastern to Calcutta; the second goes south-east *via* Poona to Madras. The **North-Western Railway** follows the course of the Indus through Sind.

These railways give an impetus to the trade of the province, distributing the imports of Bombay and Karachi, and facilitating the transport of Indian produce for export. **Bombay** and **Karachi** stand second and third among Indian ports in the total of goods dealt with, while Bombay stands first in the export of **cotton** and **seeds,** and Karachi of **wheat.**

GOVERNMENT.—The Bombay Presidency is under the rule of a **Governor,** who, like the Viceroy and the Governor of Madras, is appointed for a period of five years by the King-Emperor. He is assisted in the administration by an **Executive** and a **Legislative Council.** The province has five divisions.

The number of **native states** is very large—about three hundred and sixty—but many of them are very small in area. The most important is **Baroda,** which is under the Gaekwar. Other large states are **Cutch,** and **Khairpur** in Sind.

Aden, at the south-east of Arabia, is administered by the Governor of Bombay.

TOWNS.—All the important towns are connected with the railways.

Bombay has the best harbour on the west coast of India, the coast nearest to Europe, and this fact accounts for its growth and its present importance. As a port it stands second in India, both imports and exports being greater than those of any other port except Calcutta. [illegible] which the European mail leaves and ent[illegible] India. The raw cotton produced in the Bombay Presidency accounts for the remarkable progress made in manufacture of late years.

The city itself is built upon an island, but traffic is carried across the shallow strait which separates it from the mainland, and both the railway lines out of Bombay are in direct connection with the rest of the Presidency. Bombay is the second city of India in point of population, with about 800,000 inhabitants. A few years ago it stood first; but it has suffered severely from the ravages of plague in recent years, and its population actually decreased during the decade 1891–1901. The city is remarkable for its fine public buildings, and the caves on Elephanta Island in the harbour are much visited by sightseers.

Leaving Bombay by the **Bombay, Baroda and Central India Railway**, the first city of importance reached is **Surat** (120,000), a few miles from the sea on the mouth of the Tapti, famous as being the first British settlement in India. The transfer of trade to Bombay has led to the decline of Surat, which is a river port and has no harbour.

Baroda is the capital of the native state of that name, and has a population of 103,000. It is commercially unimportant.

Ahmadabad (185,000) is the second town in the Bombay Presidency. It was formerly a city of much political importance, and the capital of Gujarat. It is now rising into prominence as a trading and cotton-manufacturing centre.

The **Great Indian Peninsula Railway** runs north-east through the Thal Ghat, and south-east through Bhor Ghat.

Poona (153,000) is the first important town on the latter line. This hill-station is less than 2,000 ft. above sea-level, and is the summer seat of the Bombay Government. It is famous as being the former capital of the Marathas. Here the railway line

divides, one branch going south, and the other across the peninsula in the direction of Madras.

On the former are **Belgaum,** a military station, and **Dharwar and Hubli,** in the centre of a large cotton-growing area; on the latter is **Sholapur,** also a cotton-manufacturing town.

These three branches of the G.I.P. Railway are connected by lines along the eastern side of the Presidency. The only important towns are **Ahmadnagar** and **Bijapur,** former capitals of Muhammadan kingdoms.

TOWNS IN SIND.—The chief towns of Sind rose on or near the River Indus, and are now connected by the North-Western Railway, which runs near the river.

Sukkur stands at the point where the railway crosses the Indus by a fine suspension bridge.

Shikarpur, on the branch line through the Bolan Pass, is the destination of much of the trade coming by that route into India.

Haidarabad was the former capital of Sind, and has a population of about 60,000. A branch of the railway runs from this town to Umarkot, well known in history as the birthplace of the Emperor Akbar.

Karachi (117,000) is a rapidly growing port, and the headquarters of the Commissioner of Sind. The wheat and seed trade of the Punjab has developed to such an extent during the past few years as to make Karachi of great commercial importance. The harbour is protected by a breakwater.

7. CENTRAL PROVINCES AND BERAR

HISTORY.—These provinces, formerly native states under British protection, were raised into a Chief Commissionership in 1861. **Berar** was at that time under the direct control of the Government of I[illegible] assigned to the British by the Nizam of Haida[illegible] r the upkeep in his state of a military force. In 1902, by a treaty with the Nizam, the 'assigned districts' were made over finally to the British, and Berar became, for purposes of control, a part of the Central Provinces. The boundary on the north-east was slightly altered in 1905, when the Hindi-speaking districts of Chota Nagpur

were included in these provinces, and the Uriya-speaking districts of the Central Provinces were made over to Bengal.)

BOUNDARIES AND AREA.—The provinces have a very irregular outline, most nearly resembling a quadrilateral, the four sides of which are bounded by—(1) N.W., Central India; (2) N.E., Central India and Bengal; (3) S.E., Bengal and Madras; (4) S.W., Haidarabad. The Bombay Presidency touches Berar.

FIG. 64.—MAP OF THE CENTRAL PROVINCES AND BERAR.

Longmans, Green & Co., London, New York, Bombay & Calcutta.

The total **area** is about **130,000 sq. miles.** (Compare with the Punjab.)

RELIEF.—The **Vindhya Mountains** and **Central India Highlands** extend across the north, while the flat plateau of the Deccan occupies the south.

RIVERS.—The **Narbada** forms the boundary for a considerable distance on the north-west, and the **Godavari** and its

tributaries the **Pranhita** and **Penganga** on the south-west. The **Mahanadi, Tapti,** and the **Son,** a tributary of the Ganges, all rise in these provinces.

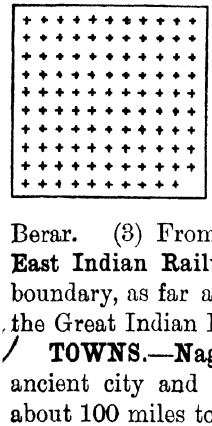
CLIMATE AND RAINFALL.—The greater part of the region is remote from the sea, but the elevation moderates a climate which would otherwise be much warmer. The rainfall is everywhere good.

PRODUCTIONS.—The soil is very fertile, and **cotton,** the characteristic crop of the Deccan provinces, is most largely cultivated, especially in Berar. Other crops are **rice, millet, oil-seeds,** and a considerable quantity of **wheat.** A large area is still covered with forests and jungle; from the former good **timber,** including **teak,** is obtained, and in the latter **lac** and **silk-cocoons** are collected.

Coal is obtained at Warora, south of Nagpur.

PEOPLE.—The **population,** a little over **14½ millions,** or 109 to the square mile, is comparatively small; but a large part of the provinces is not yet cleared of jungle, and is only inhabited by wild tribes. A quarter of the population consists of aborigines—**Gonds** and **Bhils** chiefly. There are 11½ millions of Hindus, and the chief languages are **Hindi** in the north and **Marathi** in the south and west.

FIG. 65.—AVERAGE POPULATION OF A SQUARE MILE OF CENTRAL PROVINCES AND BERAR.



RAILWAYS.—These are confined to the northern portion of the provinces. (1) The **Bengal-Nagpur Railway** runs to Nagpur, where it joins a branch of (2) the **Great Indian Peninsula Railway,** which traverses Berar. (3) From Bilaspur a branch goes north-west to the **East Indian Railway,** which runs just inside the north-west boundary, as far as Jabalpur, where it meets another branch of the Great Indian Peninsula line.

TOWNS.—Nagpur (128,000), the seat of Government, is an ancient city and an important commercial centre. **Pachmari,** about 100 miles to the north and situated in the Satpuras, is the summer capital.

Jabalpur, in the northern angle of the provinces, has a population of 90,000. It is an important railway centre, and is famous for its marble rocks.

Kamthi, near Nagpur, and **Sagar,** north of Jabalpur, are important military stations.

Raipur is the largest town in the east, and is a trade centre.

The largest towns in Berar are **Amraoti** (40,000), the cotton market, and **Ellichpur,** a military cantonment.

NATIVE STATES.—There are fifteen native states under the control of the Central Provinces Government. The largest is **Bastar** (13,000 sq. miles), a wild region with a population of only 300,000.

8. THE MADRAS PRESIDENCY

HISTORY.—Fort St. George, in the city of Madras, was one of the earliest pieces of territory acquired by the British in India, having come into their possession in 1639. As the Bombay Presidency came into the hands of the British as the result of the Maratha wars, so a considerable portion of the Madras Presidency came into the Empire after the Mysore wars.

BOUNDARIES AND AREA.—With the exception of the Northern Circars, the coast-strip between the mouth of the Kistna and Chilka Lake, the whole of the Madras Presidency lies to the south of the **River Kistna** and its tributary, the **Tungabhadra.** Madras has thus natural boundaries on three sides. The State of Mysore, although lying within the limits of the Presidency, is administered by the Government of India.

The **area** is just over **150,000 sq. miles.**

PHYSICAL FEATURES.—A **coast-strip** extends down both sides of the Presidency, that on the east or **Coromandel Coast** being much broader than that on the west or **Malabar Coast.** As stated above, the eastern strip, north of the Kistna, is known as the **Northern Circars**; the southern part is the **Carnatic.**

The **Eastern** and **Western Ghats** lie behind these coast-strips, the former broken and permitting the passage of several important rivers, the latter continuous and draining by short streams to the Arabian Sea. South of Mysore State the **Nilgiri Hills** culminate in **Mt. Dodabetta, 8,750 ft.** high. The **Anamalai Hills,** further south, are still higher. Between these two groups the **Palghat Gap** furnishes communication at an elevation of only 1,000 ft. between the two coasts. The **Cardamom Hills** occupy the extreme south of the peninsula.

The interior of the province forms a part of the **Deccan** tableland.

The rivers of Madras are important, with long courses on the plateau, and shorter courses on the coast-plain, to which they descend through deeply cut gorges. The chief are the lower courses of the **Godaveri** and **Kistna**, the **North Penner**, the **Palar**, the **South Penner**, and the **Cauvery** (**Kaveri**). The largest of these rivers flow into the sea by extensive deltas.

Much of the Coromandel Coast is fringed with lagoons, the largest being **Pulicat Lake**, just north of Madras. **Kolar Lake** lies near the coast north of the mouth of the Kistna.

CLIMATE AND RAINFALL.—No part of the Presidency is far from the sea, so the climate is free from extremes. On the coast-plains it is hot and humid, while on the tableland it is more moderate all the year round.

The **rainfall** is generally sufficient all round the coast: on the west, where the summer monsoon blows, it is abundant; on the east coast, which depends more on the winter monsoon, it is not so heavy. The Ghats deprive the rain-bearing winds of much of their moisture, and parts of the tableland occasionally suffer from drought in consequence.

IRRIGATION.—The irrigation works of the Madras Presidency are therefore very important. The most common form of water storage is by means of tanks, with which the Presidency is literally covered, but there are very important canals also. The chief of these are connected with the Godaveri, the Kistna, and the Cauvery, and the areas irrigated are in the deltas of these rivers. The head of water is obtained by an 'anicut' or dam built across the river where it enters the coastal plain, that across the Godaveri being $2\frac{1}{2}$ miles in length. These dams arrest the water and permit of its distribution over districts that are thus rendered among the most fertile in India. Important schemes for irrigating other parts of the Presidency are in course of development.

PRODUCTS.—The **timber** trees of the Western Ghats are valuable, the chief being **teak**, **sandalwood**, and **ebony**. Of cultivated plants, **tea**, **coffee**, and **cinchona** are grown on the lower slopes of the hills, and **spices** in the extreme south of the peninsula. The chief field-crops are **rice**, **cotton**, **millets**, **sugar-**

cane, and **tobacco**. A little **indigo** is also grown. The most fertile districts are the deltas of the rivers, which can be easily irrigated.

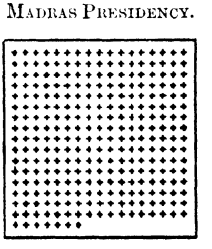
The **minerals** are important. The most productive **iron** mines in India are situated in the Salem district, but the absence of coal and limestone in the vicinity renders its working on a large scale impossible. **Manganese ore** is being raised in increasing quantities at Vizagapatam.

The mineral wealth of the Eastern Ghats is considerable. **Plumbago** is found and worked, and this mineral is also obtained in Travancore.

Salt is produced by the evaporation of sea-water in the lagoons.

PEOPLE.—Madras is one of the most thickly peopled provinces of India. The total population is 42,400,000—that is, 279 to the square mile. The states of Travancore and Cochin are, owing to their fertility, very densely populated, the former supporting 416, and the latter 596 people to the square mile.

FIG. 66.—AVERAGE POPULATION OF A SQUARE MILE OF THE MADRAS PRESIDENCY.



Nine-tenths of the people are **Hindus**, and of the remainder one-third are Christians.

The languages spoken are **Dravidian**—chiefly **Tamil**, **Telugu**, and **Malayalam**.

OCCUPATIONS.—**Agriculture** employs the great majority of the people, but the preparation of the raw products of the province—cotton, oil, indigo, and sugar—is increasing. A very flourishing **tobacco** and **cigar** industry is carried on in the neighbourhood of Trichinopoly. There is a little **mining**, and round the coasts the villagers engage in **fishing**.

TRADE.—The province is well supplied with **railways**, which radiate from Madras. The three main lines are the **South Mahratta**, the **Madras**, and the **South Indian Railways**.

For sea traffic the Madras Presidency is not so well supplied, for there is not a really good harbour in 1,700 miles of coast-line. The **coasting trade** is nevertheless considerable, the chief ports engaged being **Vizagapatam**, **Cocanada**, **Pondicherri**, **Cuddalore**, **Tuticorin**, **Quilon**, **Cochin**, **Calicut**, and **Mangalore**.

Madras is the only seaport which affords harbourage to large

ocean-going steamers, and its harbour is maintained at enormous expense. It is the only one of India's five large ports which is not the terminus of ocean passenger services. The chief **exports** are **rice, cotton,** and **oil-seeds,** and the **imports manufactured articles.**

With dredging, the harbour of Vizagapatam would be the safest and most commodious on the east coast. Proposals for its development have been made.

GOVERNMENT.—The Governor of Madras is appointed in England for a term of five years, and, as in Bombay, there are two Councils. The province is divided into districts for purposes of administration.

There are two very important native states, **Travancore** and **Cochin,** and three smaller ones, **Pudakotah, Banganapalli,** and **Sundur.**

Travancore (area, 7,091 sq. miles; population, 2,950,000) lies at the extreme south-west of the peninsula. The full effect of the monsoon is felt here, and the state is consequently well-watered and fertile. On the coast, rice is cultivated; and on the hills of the interior, teak and spices are important products.

Trivandrum (58,000) is the capital, and **Quilon** and **Alleppi** the chief ports.

Cochin (area, 1,362 sq. miles; population, 812,000) lies to the north of Travancore, and is similar to it in physical structure, climate, and productions. Cochin is the most densely peopled state in India (596 to a square mile).

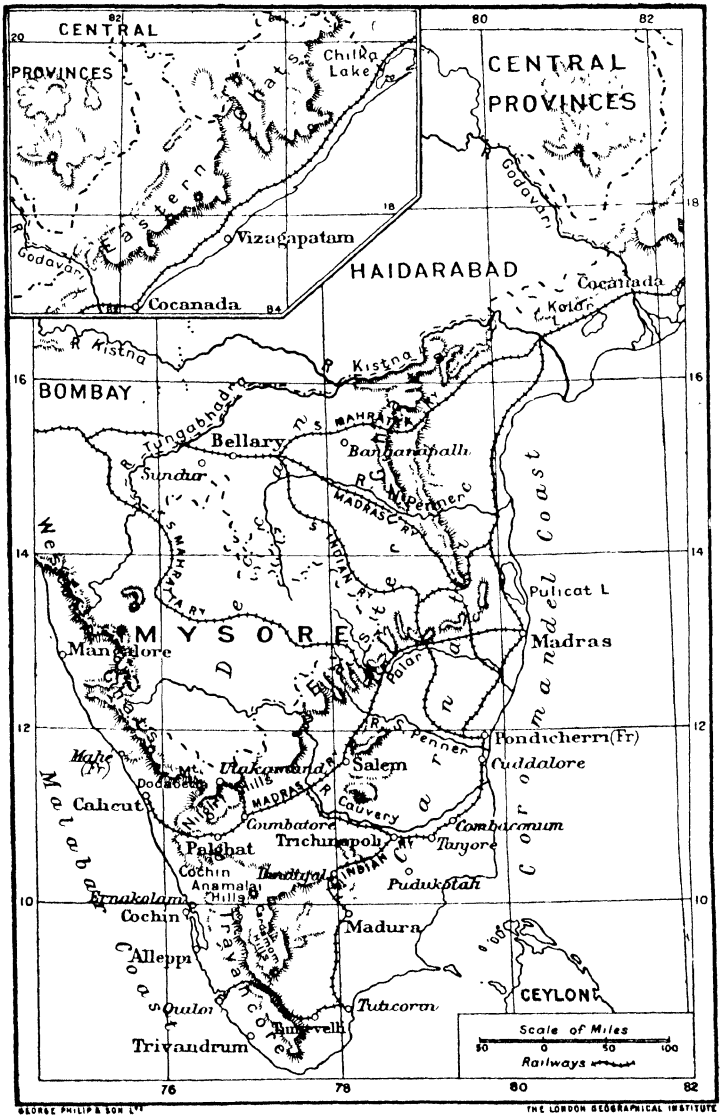
Ernakolam (22,000) is the capital, and **Cochin** the chief port.

The **Laccadive Islands,** on the 12th parallel and 200 miles from the west coast, are under the Madras Government.

TOWNS.—The Madras Presidency has a larger number of towns than any other division of India, there being no fewer than 48 with a population of over 20,000. Several important towns lie round the coast (see under 'Trade' above). The majority of the inland towns are in the south of the Presidency, and are connected by the South Indian Railway.

Madras (509,000) is the third city in India in point of population, and the fifth seaport in point of foreign trade. It owes its importance less to its trade and commerce than any other city in the Empire. The unsatisfactory nature of the

FIG. 67.—MAP OF THE MADRAS PRESIDENCY.



Longmans, Green & Co., London, New York, Bombay & Calcutta.

harbour accounts for this in a large measure, as does also the fact that it is not so conveniently situated for distribution over a wide area, and to a large population, as the more flourishing ports; moreover, the great number of small ports in the Presidency produces competition, which is not so keen elsewhere. A considerable part of the Madras Presidency is fed with foreign goods from the more favourably situated port of Bombay. The meridian of Madras passes very nearly through the centre of the Empire, and 'standard time' for the whole of India is calculated at its observatory. The city is the seat of a flourishing University.

The **South Indian Railway** main line runs through Cuddalore, Combaconum, Tanjore, Trichinopoli, Dindigul, and Madura to Tuticorin. Pondicherri, Tinnevelli, and Quilon are on branch lines.

Cuddalore, Pondicherri, Quilon, and **Tuticorin** are coasting ports. Tuticorin, the terminus of the railway, is the mail port for Ceylon.

Combaconum, Tanjore, and **Madura** are places much venerated by Hindus. Madura (106,000) is the religious capital of South India, corresponding to Benares in the north. It is noted for its temples.

Trichinopoli (104,000) and **Dindigul** are centres of the cigar-making industry.

The **South Mahratta Railway** runs into the north-west of the Presidency. The only important town passed is **Bellary,** a fortress and military station.

The **Madras Railway** has three sections. The south-western section passes Salem, Coimbatore, and Calicut.

Salem (70,000) stands in the iron district; the absence of coal and limestone prevents the profitable working of the metal on a large scale.

Coimbatore is situated at the entrance to the Palghat Gap.

Calicut is on the west coast, and was visited by Vasco de Gama in 1498. It gave its name to the fabric 'calico.'

By the north-eastern section of the Madras Railway, communication is established between Madras and the coast ports of **Cocanada** and **Vizagapatam,** and with the Bengal-Nagpur Railway, which runs as far as **Waltair.**

The most important hill-station is **Ootacamund,** which stands

at an elevation of 7,000 in the Nilgiri Hills. It is the summer seat of Government.

9. BURMA

HISTORY.—Burma, like the Bombay and Madras Presidencies, has come under British rule as the result of three successive wars. The two coast-strips of Arakan and Tenasserim were taken after the first Burmese war, the remainder of Lower Burma after the second, and Upper Burma after the third Burmese war in 1886. For several years the province was administered by a Chief Commissioner, but it was raised to the status of a Lieutenant-Governorship in **1897.**

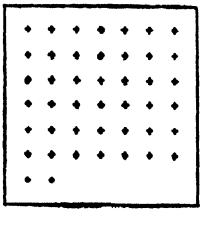
BOUNDARIES AND AREA.—On the west, Burma is bounded by the new province of Eastern Bengal and Assam, and by the Bay of Bengal. On the remaining sides it is bordered by foreign territory—China, French Indo-China, and Siam.

In extent it is the largest province, having an **area** of a little under **240,000 sq. miles,** about equal to Bengal and Eastern Bengal and Assam together.

(For 'Relief,' 'Drainage,' 'Rainfall and Climate,' 'Productions,' and 'People,' see pages 84–87.)

POPULATION.—The population in 1901 was about **10½** millions. This number included nearly 9½ million **Buddhists.** The people belong almost entirely to the **Tibeto-Burman race,** those of the interior consisting of wild uncivilised tribes.

FIG. 68. — AVERAGE POPULATION OF A SQUARE MILE OF BURMA.

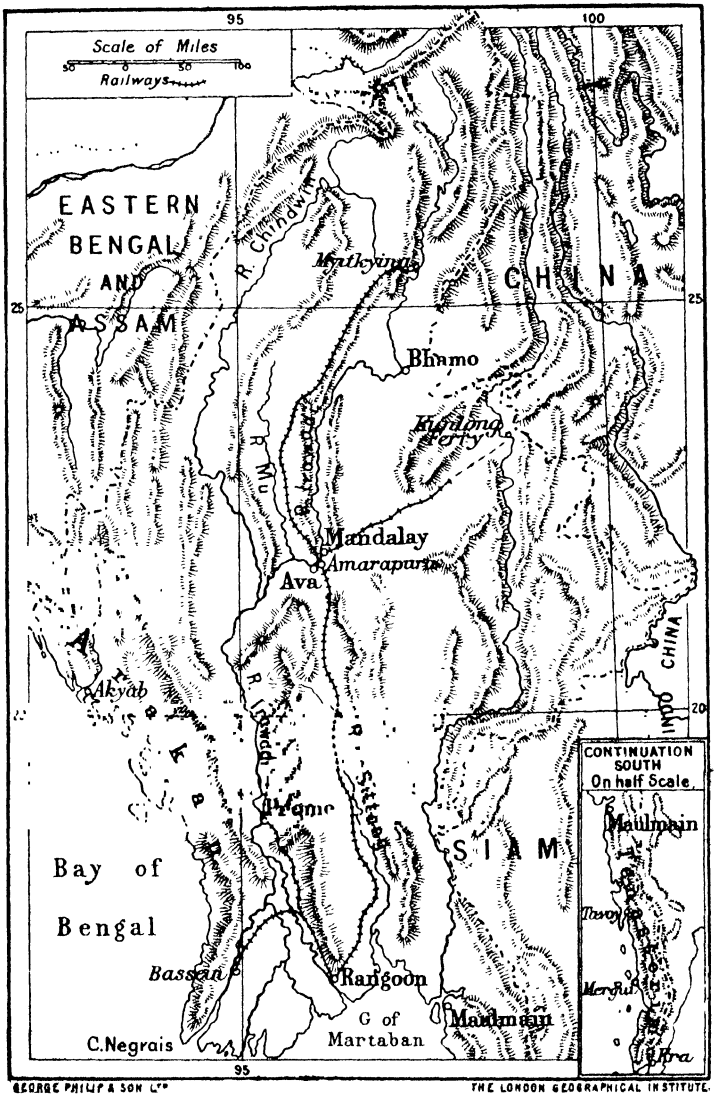


OCCUPATIONS.—The industries are connected almost entirely with the natural products of the province.

1. **Agriculture.**—This is the occupation of the vast majority. **Rice** is the great crop, and there are a number of mills for **husking** it. **Tobacco** is grown and made into **cigars.**

2. **Connected with Forests.**—**Timber** (especially **teak**) is felled, floated down the rivers, and **sawn** in mills. The Burmese excel in **wood-carving.** Silk is collected in the forest, and the **silk-weaving** industry is important.

FIG. 69.—MAP OF BURMA: POLITICAL.



Longmans, Green & Co., London, New York, Bombay & Calcutta.

3. **Mining.**—**Petroleum** is pumped from the oil-wells of Upper Burma; other minerals, of less commercial importance to Burma, are **coal, iron,** and **tin.** Burma is famous for its rubies, found on the hills near the Irawadi above Mandalay.

COMMUNICATIONS.—1. **Rivers.**—The Irawadi and its tributary the Chindwin are very important as highways. A regular service of steamers goes up and down the river between Bhamo and Rangoon, and through the various channels at the mouth.

2. **Railways.**—The longest and most important line runs from Rangoon to Mandalay along the Sittang Valley, and thence for 350 miles along the Mu Valley towards the frontier. Other lines travel along the Irawadi to Prome, and across the delta to Bassein.

TRADE.—Like India, Burma has good coasting ports, and considerable trade goes on between these and the Indian ports, especially Calcutta. The chief of these are **Akyab, Moulmein, Tavoy,** and **Mergui.**

Rangoon is the centre of the foreign trade, and is a port of call for several important lines of steamers. It stands fourth in foreign trade among the ports of the Indian Empire. It was formerly third, but has now been passed by Karachi.

The chief exports are **rice, mineral oil,** and **teak,** and other products of the country on a much smaller scale. The leading imports are **manufactured goods, metals,** and **silk** (raw and manufactured).

TOWNS.—**Rangoon** (235,000) is a remarkable example of the rise of a port with the commercial development of a country, the population and trade having increased tenfold during the past fifty years. The city is well laid out, and is situated about 20 miles from the sea, on the mouth of the Rangoon River. Less than half the inhabitants are Burmese, the remainder being Chinese and people from Madras and Bengal.

Mandalay (184,000), the former capital of Upper Burma, is an important centre of river and railway traffic. The ancient capitals of **Ava** and **Amarapura** are near by.

Bassein, on a river of the same name, although nearly 80 miles from the sea, is accessible by large steamers, and it is the great rice market of Burma.

Akyab also exports rice; **Moulmein** has most of the timber trade; **Tavoy** and **Mergui** export edible birds' nests to China.

EXAMINATION PAPERS

A. 1. Which parts of India are most densely populated? Account for the density in each case.
2. What are the chief occupations of the people of Bengal?
3. What is the extent of the Bombay Presidency, and what are its chief physical divisions?
4. Describe the canal system of the Punjab.

B. 1. Account for the rise, in their particular localities, of Allahabad, Bombay, Delhi, Karachi, Peshawar.
2. Describe the physical features of the North-West Frontier Province.
3. Give a short account of the river system of Burma.
4. Which of the provinces of India have natural boundaries? Illustrate by a map.

C. 1. What are the chief articles of trade dealt with at Calcutta, Rangoon, Bombay, Karachi? Account for their preponderance at these ports.
2. Describe a railway journey from Bombay to Madras.
3. What are the chief differences in climate and rainfall between Upper and Lower Burma? How do you account for them?
4. Write a short account of each of the following:—Palghat Gap, Sukkur, Shikarpur, Goa, Jabalpur, Hardwar.

D. 1. Describe the trade and trade-routes across the north-west frontier of India.
2. Give a short account of the river system of the Central Provinces.
3. Compare the Madras and Bombay Presidencies as to shape, size, configuration, population, and products.
4. Give in order, commencing at Karachi, the chief coasting ports of India.

PROTECTED STATES.—1. KASHMIR

GENERAL DESCRIPTION.—Kashmir is the second in size of the Indian native states, but owing to the mountainous nature of the country the population is small. The scenery, climate, and sport attract large numbers of tourists and holiday makers, especially to the beautiful valleys of the south-west. The best known part of the country is the Valley of Kashmir, drained by the River Jehlam.

The state has been tributary to the British since the close of the first Sikh war in **1846.**

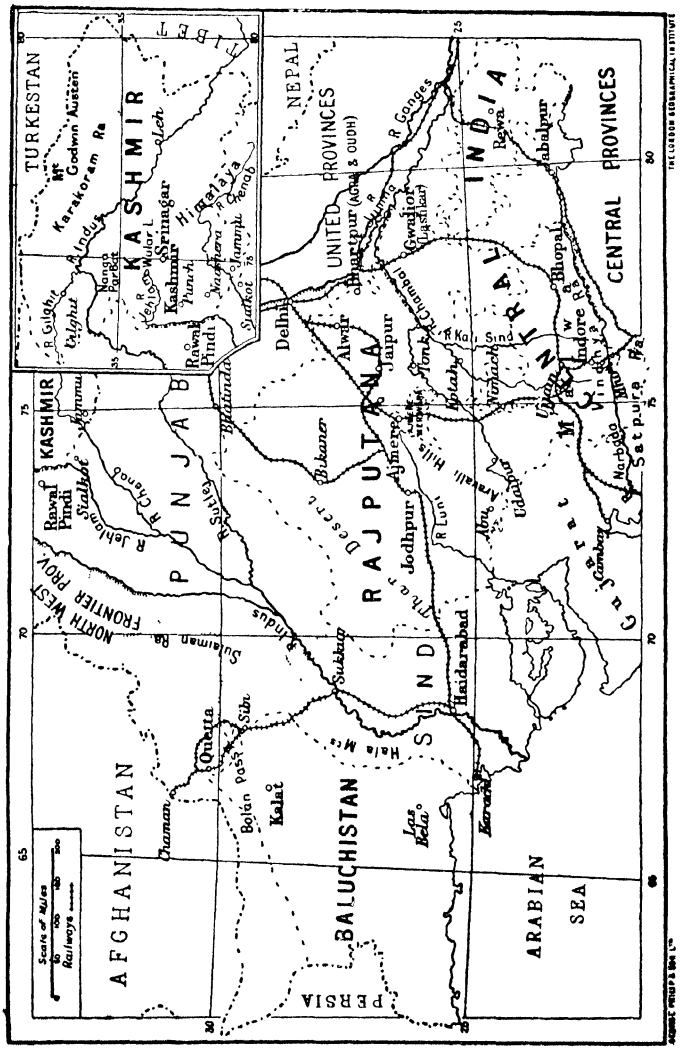


FIG. 70.—MAP SHOWING PROTECTED STATES: NORTHERN INDIA.

BOUNDARIES AND AREA.—Kashmir is roughly four-sided in shape, and has an area of **80,900 sq. miles.** It is bounded on

the west and south by Indian territory—the North-West Frontier Province and the Punjab; on the east and north by Chinese territory—Turkestan and Tibet.

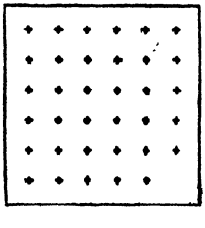
PHYSICAL FEATURES.—Kashmir is a land of lofty mountains and valleys. Three main ranges cross the state from north-west to south-east. The most northern of these, and loftier than the neighbouring Himalayas, is the **Karakorum Range.** Its highest peak, **Mount Godwin Austen** (28,250 ft.), is the second highest in the world. South of the Karakorum Mountains are the two parallel ranges of the **Himalayas. Nanga Parbat,** the highest peak of the inner range, is 26,600 ft. high. The perpetual snows and the glaciers of these lofty ranges feed innumerable streams which either join the Indus and its tributaries or, as in the north-east, drain into lakes.

The River **Indus** flows north-west, diagonally across the state. At the point where its course bends southward it is joined by the **Gilgit** from the west. The **Jehlam** and **Chenab** drain the south-west area. **Wulur Lake,** below Srinagar, is an expansion of the former river, and is the largest fresh-water lake in India.

CLIMATE AND PRODUCTIONS.—The elevation of the country renders excessive heat unknown. In most parts the climate is cold, but the summer in the lower valleys is very pleasant, and the Valley of Kashmir is a favourite resort for people who wish to escape the heat of the Indian plains.

The **rainfall** is slight, especially in the interior, the dryness of the northern slopes of the mountains accounting for the snow-line being actually higher than on the slopes facing to the south.

FIG. 71.—AVERAGE POPULATION OF A SQUARE MILE OF KASHMIR.



The **forests** are important, the chief timber cut being deodar. The field crops are not commercially important; the chief are **wheat, barley,** and **millets. Fruit** is of excellent quality, and the beautiful flowers which grow wild have obtained for the country the name of the 'Garden of India.'

PEOPLE.—The population is about 2,900,000 (35 to the square mile), of whom about three-quarters are Muhammadans, so that Kashmir may be described as a Muhammadan state under

a Hindu ruler, just as Haidarabad is a Hindu state under a Muhammadan ruler.

The Kashmiris are tall, well-built, hardy people, and make excellent labourers. There is an admixture of Mongol blood in the people on the Chinese frontier.

TRADE.—The trade is with the Punjab, the chief routes being *via* Rawal Pindi, Jehlam, and Sialkot. A railway from Rawal Pindi, *via* Murree, to Srinagar is in course of construction.

GOVERNMENT.—The state is governed by a Maharajah, who is directly responsible through the British Resident to the Government of India. There are twelve divisions, of which the south-western—Punch, Kashmir, Naoshera, and Jammu—are most thickly populated.

TOWNS.—**Srinagar** (123,000), the capital, is the only large town. It stands on the Jehlam, in a picturesque valley. The river at this point is kept back by banks, and when the melting of the snows brings down an unusually large supply of water, these sometimes break, and the town is therefore subject to floods.

Jammu is connected with Sialkot by railway.

Leh, on the River Indus in Ladakh, is the most important trade centre of the interior.

Gilgit is the outpost of the Empire in the extreme north-west.

2. BALUCHISTAN

Baluchistan is the most western part of the Indian Empire, stretching from the Sulaiman and Hala Mountains to about the 60th meridian of longitude.

Its main **divisions** are:—

1. **British and administered territory** in the north-east corner of the province—area, about 46,500 sq. miles.

2. The **protected native states** of Kalat and Las Belas—area, 78,000 sq. miles.

3. **Tribal areas,** semi-independent but subject to the control of the Political Agent in Sibi—area, 7,000 sq. miles.

The whole of the country has come under British influence since **1876.**

BOUNDARIES.—On the east, Sind, the Punjab, and the

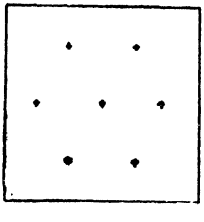
N.W.F. Province; on the north, Afghanistan; on the west, Persia; and on the south, the Arabian Sea.

PHYSICAL FEATURES.—Geographically Baluchistan belongs to the great **Plateau of Irania,** which also includes Afghanistan and Persia. Mountains cross the tableland at intervals, and the whole of the country is desert. An occasional stream is met with, but the small cultivated areas have to be irrigated. This is done by means of water led along underground tunnels (called **karezes**), which are tapped at intervals by wells.

CLIMATE AND PRODUCTIONS.—Baluchistan, like the remainder of the Iranian Plateau, lies outside the monsoon region, and in the tropical rainless belt. The climate is therefore very dry, and in winter extreme. The thermometer in winter often sinks below zero at night; the elevation prevents excessive heat. The only vegetable product which grows in sufficient quantity for export is **fruit,** particularly grapes and melons. The villagers grow a little wheat and millet where water is available.

PEOPLE.—The total population is only about **914,000,** or one and a quarter that of the city of Bombay. Of these about 350,000 live in British territory. The people are practically all Muhammadans, and nomadic in habits, spending the summer on the plateau, and avoiding the severe winter by migrating to the plains of Sind. They live largely in rude huts, and their wealth consists of a few camels. Nearly three lakhs of the inhabitants are **Brahuis** who speak a **Dravidian** tongue; the existence here of this isolated Dravidian tribe has led some authorities to the conclusion that this race came originally into India by this route.

FIG. 72. — AVERAGE POPULATION OF A SQUARE MILE OF BALUCHISTAN.



GOVERNMENT.—The Agent to the Governor-General is in charge of the province, and he is responsible direct to the Government of India. The **Khan of Kalat** is amenable to the advice of this officer in all matters of importance in the administration of his territories.

TOWNS.—**Quetta** was a native town of some importance in the Bolan Pass before the British occupation. It is now the British military outpost for this part of the frontier. The

strategic branch of the North-Western Railway from Sukkur runs beyond Quetta to Chaman on the Afghan frontier. Considerable trade is carried on, fruit and carpets being brought in from Persia by caravans.

Kalat, almost due south of Quetta, is the capital of the Khan of Kalat's territory.

3. RAJPUTANA

Rajputana is a collection of twenty native states, with a patch of British territory, Ajmere-Merwara, lying in the centre. The state takes its name from the race of the ruling chiefs (**Rajput**), to which all but three belong. There is only one Muhammadan state—Tonk.

BOUNDARIES AND AREA.—Rajputana is roughly four-sided in shape, with its diagonals running north and south and east and west. The bounding provinces are: north-west, the Punjab; north-east, the Punjab and United Provinces; south-east, Central India; south-west, Sind and Gujarat.

The **area** is **127,000 sq. miles.** (Compare with the Punjab.)

PHYSICAL FEATURES.—The **Aravalli Range** runs in a north-easterly direction across the province, dividing it into two well-defined and unequal parts.

1. **Western Rajputana.**—This portion extends from the Aravallis to Sind, and includes the Thar Desert. Here (1) the rainfall is very deficient; (2) the country is ill-watered, the Luni being the only river; (3) the soil is sandy and parched; (4) vegetation is very scanty; (5) there are very few towns; (6) the people move from place to place seeking pasturage for their flocks.

2. **Eastern Rajputana.**—This is the smaller section. (1) The rainfall is generally sufficient; (2) the Chambal and its tributaries spread over the whole region; (3) the soil is fertile; (4) good crops are grown; (5) there are many towns; (6) the people live in towns and villages and follow agricultural pursuits.

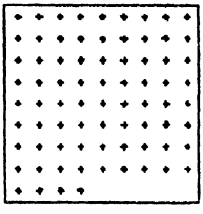
Sambhar Lake lies to the north of Ajmere.

CLIMATE AND PRODUCTIONS.—The climate varies from dry and extreme (similar to Sind) in the north-west to warm or tropical in the south-east.

The lack of rain renders much of the country subject to famine, but there are projects for watering the western half by canals. In the west the only crop that can be grown is millet; in the east, wheat and barley can be grown in the winter, and sugar-cane and cotton in the summer.

PEOPLE.—The population is about 9¾ millions, or about 76 to the square mile. The east is much more thickly populated than the west. Only about one-tenth of the people are Muhammadans, and there are about 350,000 Jains; the rest are Hindus.

FIG. 73.—AVERAGE POPULATION OF A SQUARE MILE OF RAJPUTANA.



STATES.—East of the Aravalli Hills, the chief states are **Udaipur, Jaipur, Bhartpur, Alwar, Kotah,** and **Tonk.** To the west, the largest are **Bikanir** and **Jodhpur.** Each state has a resident political agent, and the whole Agency is under the charge of the Agent to the Governor-General, whose headquarters are at Ajmere.

The small British district of **Ajmere-Merwara** is also under the control of the Agent.

RAILWAYS.—The main line of the Bombay, Baroda and Central India Railway (a narrow-gauge line) passes through the province, and there are railway connections eastward with Haidarabad (Sind), and northward with Bhatinda.

TOWNS.—The internal strife among the various states led to most of the chief towns being built in strong natural positions and well fortified.

Jaipur (160,000) is the largest city in Rajputana. It is a commercial centre, and has fine public buildings.

Udaipur is the capital of the state of the same name. The Raja ranks highest among the Rajput chiefs.

Jodhpur and **Bikanir** are capitals of large arid states in the western half of the Agency.

Ajmere (70,000) stands at a considerable elevation above the surrounding plain, and enjoys a pleasant climate for most of the year. It is the seat of Government, and has a large college for the education of native chiefs.

Abu is a hill station at the southern extremity of Rajputana. It stands at an elevation of 4,000 ft., and is a centre of Jainism.

4. CENTRAL INDIA AGENCY

This is, like Rajputana, a collection of native states. The number of states in Central India (143) is, however, seven times as many as in Rajputana, while the total area is only about two-thirds. The method of control is similar—the states being administered by an Agent to the Governor-General.

BOUNDARIES.—The outline of the Agency can best be understood by a study of the south-eastern side of Rajputana, the southern boundary of the United Provinces, and the northern boundary of the Central Provinces.

A tongue of land projecting southwards from the United Provinces and another northwards from the Central Provinces meet and divide the Agency into two distinct areas, of which the eastern is about half the size of the western.

PHYSICAL FEATURES.—Most of the Agency is occupied by a gently rising **tableland**, the slope being from south to north. The **Vindhya Range** traverses the south, and the **Satpura Mountains** enter the south-western corner.

The eastern section of the Agency is drained by the **Chambal** and its tributaries, especially the **Kali Sind** on the north, and the **Narbada** on the south.

The western section is watered by the **Son** and other small tributaries of the Ganges.

CLIMATE AND PRODUCTIONS.—The configuration of the surface accounts for the climate, which is **hot** in the less elevated area to the north and more **moderate** in the hilly region to the south. The Vindhya Mountains condense the rain-clouds from the west, but their direction permits the rain-bearing winds to penetrate into the interior. The rainfall is therefore good, and increases in amount from the western to the eastern portion of the Agency.

The soil is fertile, and the crops are good. The **opium** grown on the Malwa plateau in the west is the best in India; other important crops are **millet**, **tobacco**, **cotton**, and **sugar-cane**. **Wheat** is a cold-weather crop.

PEOPLE.—The population is about **8½ millions**, of whom 8 millions are in one state—Gwalior.

The **Dravidian** element which prevails over South India now

begins to come into evidence. In the hill tracts of the south there are large numbers of **Gonds** and **Bhils.**

STATES AND TOWNS.—Some of the larger states have not compact and well-defined areas. Gwalior and Indore, for example, have small pieces of territory scattered away from the main part of the state.

Gwalior State occupies nearly one-third of the whole Agency. Its area is 25,000 sq. miles.

The city of **Gwalior**, or **Lashkar** (89,000), is the capital, and the largest town in Central India. It stands on a rock fortress of great natural strength. The G.I.P. Railway runs close to the city.

Nimach, on the B.B. and C.I. Railway, and **Ujjain** are both situated in Gwalior territory, remote from the main part of the state. The former is a military station, and the latter is celebrated for its Hindu remains.

Indore State lies to the south-east of the Agency. **Indore** (86,000) is the capital and the headquarters of the Agent to the Governor-General.

Mhow, to the south, is a military cantonment.

Bhopal State is to the east of Indore. **Bhopal**, the capital, stands on the plateau, and is an important station on the G.I.P. Railway.

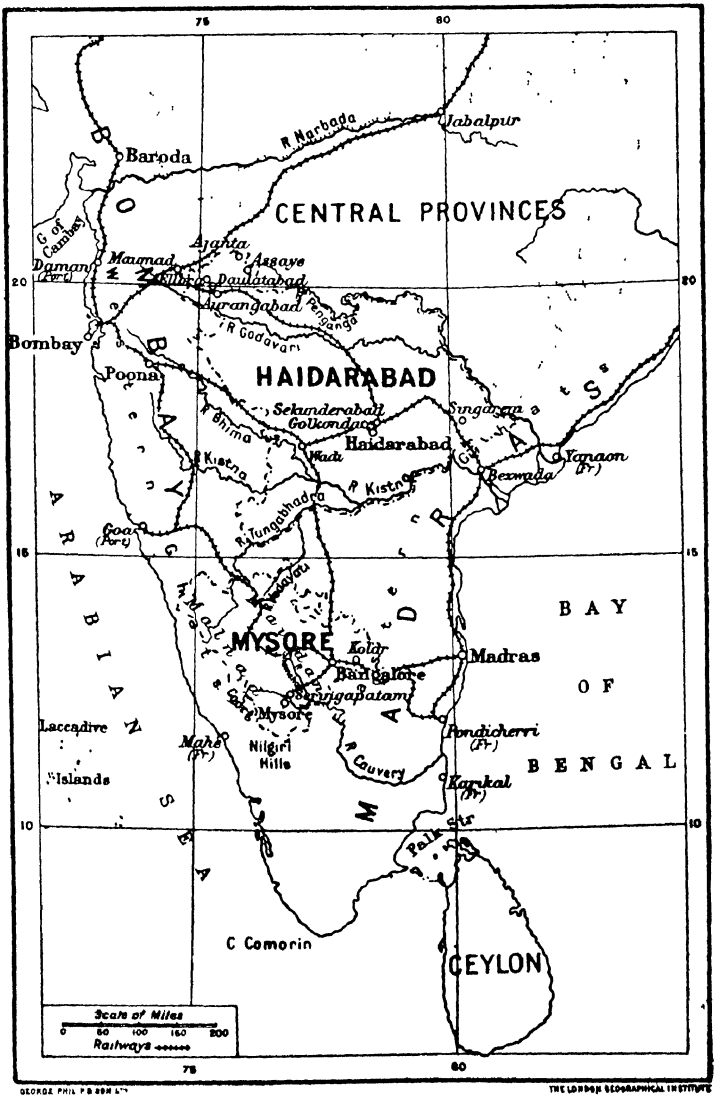
Rewa is the largest state in the eastern section of the Agency, and in point of size is next to Gwalior. The state possesses an important deposit of **coal**. **Rewa**, the capital, and the largest town in this part of the Agency, has only 24,000 inhabitants.

5. HAIDARABAD

Haidarabad is the largest native state in the Indian Empire, and lies in the heart of the Deccan. It is entirely an inland state, although the boundary comes within a hundred miles of the coast in the vicinity of the mouths of the Godaveri and Kistna.

BOUNDARIES AND AREA.—The state is roughly triangular in shape, with the Madras Presidency, the Central Provinces, and the Bombay Presidency along the three sides. It has natural boundaries for a very considerable distance—the Godaveri, with

FIG. 74.—MAP SHOWING PROTECTED STATES: SOUTHERN INDIA.



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its tributary the Penganga on the north; and the Kistna, with its tributary the Tungabhadra on the south.

The **area** is **82,700 sq. miles.** (Compare with Kashmir.)

PHYSICAL FEATURES.—The surface is a **tableland** with its general slope from west to east. There are occasional hill ranges, but none of any great height. The eastern coast-plain penetrates for a considerable distance into the plateau in the lower valleys of the **Godaveri** and **Kistna.**

The northern half of the state is drained by the main stream of the **Godaveri** and its numerous tributaries. The **Kistna** and its left-bank tributaries, of which the chief is the **Bhima,** drain the southern half.

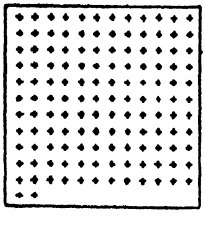
CLIMATE, RAINFALL, AND PRODUCTIONS.—The elevation of the state prevents any great degree of heat, and its southerly latitude protects it from cold, and the climate may best be described as **warm.** The rainfall, amounting to between 30 and 40 inches, is received mostly during the summer monsoon.

The chief crop is **cotton,** as in other parts of the Deccan. Other cultivated crops are **millet, oil-seeds,** and a little **wheat,** none of which requires much moisture.

Of mineral products, **coal,** which is found at Singareni in the extreme east of the state, is the most important.

PEOPLE.—The total population is about 11,150,000, of whom only one-tenth are Muhammadans. Haidarabad is therefore a Hindu state with a Muhammadan ruler. The people belong mainly to the **Dravidian** race, and the languages chiefly spoken are **Marathi** and **Telugu.**

FIG. 75.—AVERAGE POPULATION OF A SQUARE MILE OF HAIDARABAD.



GOVERNMENT.—The ruler of Haidarabad is called the **Nizam**—a title which has been retained since early in the eighteenth century, when the state was tributary to the Moghal Empire. The Government of **India** is represented by a Resident.

RAILWAYS.—The railways of the state radiate from Haidarabad, the system being known as the **Nizam's Guaranteed State Railway.** One branch goes east and meets the Madras Railway at Bezwada; a second runs north-west, meeting

the G.I.P. Railway at Manmad; and a third, travelling west, meets the same line at Wadi.

TOWNS.—**Haidarabad** (448,000) is the capital, and the fourth city in point of population in India. The inhabitants were once well known for their lawlessness but great improvements have been effected in recent years. Near Haidarabad are **Secunderabad**, with the largest military garrison in India, and **Golkonda**, once famous for its diamond cutting and polishing.

In the north-west are **Aurangabad** and **Daulatabad**—ancient capitals; and **Ellora** and **Ajanta**, with remarkable architectural remains in the shape of rock-hewn temples. In the same neighbourhood is the battlefield of **Assaye**.

6. MYSORE

Mysore is the native state occupying the southern portion of the Deccan tableland. The average elevation (about 2,000 ft.) is nearly twice that of Haidarabad.

BOUNDARIES AND AREA.—The state is almost entirely enclosed by the Madras Presidency. The Bombay Presidency borders it for a short distance on the north-west, and Coorg on the south-west. It is an irregular triangle in outline, with one side nearly parallel to the west coast. The **area** is just under **30,000 sq. miles.**

PHYSICAL FEATURES.—To the east and west are the **Ghats**, which meet in the **Nilgiri Hills**, immediately to the south of the state. The Ghat region to the west is known locally as the **Malnad**, the western plateau as the **Maidan.** The highest part of Mysore is a ridge crossing the middle of the state from east to west. From this the rivers drain north to the **Kistna**, and south to the **Cauvery.** The chief streams flowing into the former are the **Tunga** and the **Vedavati**, and into the latter the **Shamsha.**

CLIMATE AND PRODUCTIONS.—The elevation of the state renders its climate temperate. On the west the monsoon rainfall is heavy; in the rest of the state it only amounts to about 30 inches.

The vegetable products are important. The forests yield valuable timber, especially **teak** and **sandalwood.** In the north

cotton is grown, and in the river valleys **sugar-cane** and **rice**, but the most important crop is **millet (ragi)**. **Coffee** is grown on the slopes of the Western Ghats.

The only important mineral is **gold**, which is obtained from the Kolar Goldfields, in the extreme east of the state.

PEOPLE.—The inhabitants number 5½ millions, or 188 to the square mile. Of these, 5 millions are Hindus—a larger proportion than in any other province or state in India. The people belong to the Dravidian race, and the language spoken is **Kanarese.**

RAILWAYS.—The **Southern Mahratta Railway** runs through the middle of the state, a branch going south-west from Bangalore to Mysore.

TOWNS.—**Mysore** (68,000) in the south, is the capital, and the residence of the Maharajah and the British Resident. **Seringapatam**, a few miles to the north, and the former capital, is now little more than a village.

Bangalore (160,000) is the only large city, and a military station. It stands at an elevation of over 3,000 ft., and enjoys a mild climate throughout the year. It is an important commercial centre.

The **Kolar Goldfields** support a population of 38,000.

COORG

Coorg is a small state to the south-west of Mysore, and is under the control of the British Resident of that state. It has **an area** of 1,580 sq. miles, and a **population** of 180,000. The state is mountainous and well wooded. **Coffee** is commercially the most important product.

THE ANDAMAN AND NICOBAR ISLANDS

These two groups of islands form one end of the great curve which sweeps round from Cape Negrais to New Guinea. Together they form one political division, under the control of a **Chief Commissioner.** Their importance lies in the fact that **Port Blair** on South Andaman is the **penal settlement** for the Empire. The islanders are **negritos.**

INDEPENDENT TERRITORY

Nepal and **Bhutan** are two Himalayan states, politically independent, but geographically a part of India. They are separated from each other by Sikkim.

Nepal occupies an oblong strip of Himalayan territory between the 80th and 88th meridians. Its area is about **54,000 sq. miles.**

The great northern range attains its greatest height in Nepal, both **Mt. Everest** and **Dhaulagiri** being situated in this state. The upper courses of the **Gogra, Gandak,** and **Kusi** are the chief rivers.

At the foot of the mountains is the **Terai,** and this strip, being well watered both by rivers and rainfall, is very productive. A large part is, however, covered with jungle. The chief crops are **rice, millets,** and **oilseeds.** The timber is valuable, the chief commercial varieties being **sal** and **sisu.**

The population of Nepal is about three millions, or about three times that of Calcutta. A certain number of its hardy and warlike mountain people, called **Gurkhas,** are drafted every year into the Indian Army.

The capital is **Khatmandu,** near the centre of the country, and here a British Resident resides.

Bhutan, further to the east, is only about one-third the size of Nepal, the area being just under **17,000 sq. miles.**

Like Nepal, it is an entirely mountainous state, the highest peak being **Chumalari,** about 24,000 feet in height. The drainage of the country is southward into the Brahmaputra, the **Manas** being the chief stream.

The people of Bhutan are supposed to number less than a lakh, and they are less advanced than the Nepalese. They grow only sufficient produce to satisfy their own needs, and there is practically no trade.

The capital, **Punakha,** near the centre of the country, is little more than a mountain village, and very little is known about it.

FOREIGN POSSESSIONS

1. **FRENCH.**—Altogether less than 200 sq. miles.

(1) **Chandarnagar,** on the River Hugli; (2) **Yanaon,** on the coast, in the delta of the Godaveri; (3) **Pondicherri,** the residence

of the French Governor; and (4) **Karikal**, both on the Carnatic coast; (5) **Mahé**, on the Coromandel coast, south-west of Mysore.

2. **PORTUGUESE.**—A little over **1,000** sq. miles.

1) **Goa,** a maritime district south of Bombay;

(2) **Diu,** an island; and (3) **Daman,** a small town, on opposite sides of the entrance to the Gulf of Cambay.

EXAMINATION PAPERS

A. 1. Describe the physical features of Kashmir. What effect has the elevation upon the climate?
2. Describe and account for the climate of Baluchistan.
3. What method of irrigation is carried on in Baluchistan?
4. Contrast as completely as you can Eastern and Western Rajputana.

B. 1. What do you understand by the Central India Agency? Mention the four largest native states in it.
2. Compare and contrast the states of Kashmir and Haidarabad.
3. What languages are spoken in Baluchistan, Mysore, and Haidarabad?
4. Where and what are Nanga Parbat, Leh, Kalat, Rewa, Ellora, Kolar?

C. 1. Write a short account of Nepal.
2. What European Powers have possessions in India? Where are they situated?
3. What is the form of Government in Kashmir, Sikkim, Central India Agency, Baluchistan?
4. Compare the area and population of the Protected States with those of the British Provinces.

D. 1. Draw a map of the Indian Empire showing the chief mountain ranges and the rivers which flow from them.
2. Mention the chief lakes of India, and give their situation.
3. Which of the Indian rivers have deltas? Give the reason as far as you can. How far are the 'stages' of Indian rivers typical?
4. Where in India are the areas of (1) heavy rainfall, (2) deficient rainfall? Give reasons.

E. 1. In which parts of the country is agriculture aided by irrigation? What different means are employed in different parts?
2. Draw an outline map of India and insert on it the names of the chief productions in their proper localities.
3. Illustrate by reference to India the belts of vegetation encountered in climbing from the plains to the snow-line.
4. Where are the chief forest areas of India? What timber is found in them?

F. 1. Name the chief manufactures of India, and the cities connected with them. Mention also any circumstances that have affected their growth in recent times.

2. With what countries is the trade in the following articles carried on:—opium, jute, wheat, tea?
3. Which parts of India are ruled by a Governor, a Lieutenant-Governor, a Chief Commissioner, an Agent to the Governor-General?
4. Account as far as you can for the different races and languages found in India.

CEYLON

POSITION AND SIZE.—**Ceylon** is separated from India by **Palk Strait** and the **Gulf of Manaar.** Although politically distinct, geographically it belongs to India, a number of islands and rocks, known as **Adam's Bridge,** stretching across the strait, and almost connecting it with the mainland. The island is 270 miles long, 25,000 sq. miles in area, and the southernmost point is less than 6° from the Equator.

PHYSICAL FEATURES.—The southern part of the island is **mountainous,** but the northern part is **low.** The highest peak, **Pedrotalagala,** is 8,300 ft. high. There are numerous streams flowing from the mountains; the longest is **Mahaweli Ganga,** which flows almost due north into **Trincomalee Bay.**

CLIMATE AND RAINFALL.—The climate is **tropical**—that is, **warm, moist,** and **equable.** The proximity of the sea and the abundant rainfall prevent extremes of heat. The mountainous part of the island in the south gets over 100 inches of rain annually, and even the small, comparatively dry area in the north-west gets nearly 50 inches.

PRODUCTIONS.—The forests produce valuable **timber**—**ebony, satinwood,** &c. Cultivated crops are very important, of which the chief is **tea**; other products are **rice, spices,** and **oil-seeds. Cocoa, rubber, cinchona** (for quinine), and **coco-nuts** are exported, of which rubber is likely to become most valuable to the island in the future.

Of **mineral** products **graphite,** or plumbago, and **gems** are commercially the most valuable. **Iron** is abundant, but cannot be profitably worked for lack of fuel.

The **pearl** fishery is a source of considerable revenue.

PEOPLE.—The population is 3½ millions, or **141** to the square mile. Of these nearly 2½ millions are **Sinhalese**; and of the remainder, **Tamils** and **Moormen** (descendants of Arabs) are the most numerous. The former are imported from India in large

RELIEF MAP.

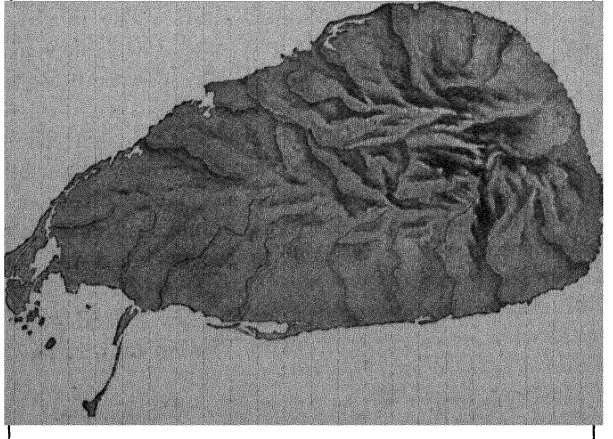
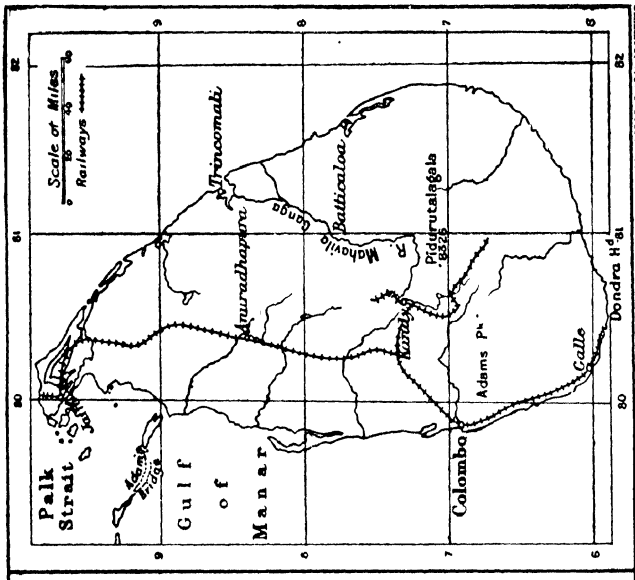


FIG. 76.—MAP OF CEYLON.

POLITICAL MAP.



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numbers for employment on the plantations. The planting operations of the island are in the hands of **Europeans.**

The chief religion is **Buddhism.**

TRADE.—Most of the trade is with British India and the British Isles. The chief exports are **tea** and **coco-nuts,** and after these come **graphite, cocoa,** and **spices.** **Rubber** will be an important export in a few years.

The chief imports are **food materials, kerosene oil, fabrics, metals,** and **machinery.**

GOVERNMENT.—The island belongs to the British Empire, and forms a **Crown Colony** under a Governor.

The **Maldive Islands,** a group of typical coral atolls 500 miles to the west, are under the Ceylon Government.

TOWNS.—**Colombo** (158,000), on the west coast, is the capital. It enjoys a splendid commercial position on the ocean highway from Europe to Australia and the Far East, and is one of the most important ports of call in the world.

Kandy is the chief town of the interior.

EXAMINATION PAPERS

1. Describe the physical features of Ceylon, and show the connection between the mountains and river courses.
2. Give an account of the climate and rainfall of the island.
3. What are the chief mineral and vegetable products, and how far are they exported?
4. What races of people inhabit Ceylon, and what is the form of Government?

INDO-CHINA

GENERAL DESCRIPTION.—The peninsula of Indo-China lies to the south-east of Asia, almost entirely within the Torrid Zone.

The region is divided politically as under:—

1. The **French** possess the eastern states of **Cambodia, Cochin-China, Annam,** and **Tongking,** and exercise control over the **Laos Territory** which lies adjacent to the Shan States of Burma. The total area is 363,000 sq. miles and the population about 18 millions.

2. **Siam** is an independent state which occupies the middle of the peninsula and the eastern half of the Malay Peninsula as far as the Isthmus

of Kra. The native states from this point as far south as the 6th degree of latitude are also under the control of Siam. Area about 220,000 sq. miles (compare with Burma) and population about 9 millions.

3. The **British** possess Burma and the southern end of the Malay Peninsula. Part of the latter is under direct British control, and is known as the **Straits Settlements**; part is protected native territory, called the **Federated Malay States.**

CONFIGURATION.—Indo-China consists of a broad northern portion, and a long narrow peninsula stretching southwards to within a few miles of the Equator. The **Gulf of Siam** occupies the south of the larger portion. Compared with India the coast-line is more broken up and, proportionately to area, longer. The shorter arm of the peninsula terminates in **Cape Cambodia,** and the longer in **Cape Roumania,** the most southerly point of the mainland of Asia. The **Gulf of Tongking**, in the north-east, is protected seawards by the Chinese island of **Hainan.**

RELIEF.—The north, east, and west of the peninsula are very mountainous, a great semicircle of mountains enclosing the vast alluvial plain of Siam and Cambodia.

On the north the mountains of Assam and Upper Burma are continued across the Laos Territory into Tongking. The lower valley of the Red River is an extensive plain.

On the east a mountainous backbone runs through the whole length of Annam, which prevents intercourse between the interior and the coast.

On the west the mountains of Burma are continued southward throughout almost the entire length of the Malay Peninsula.

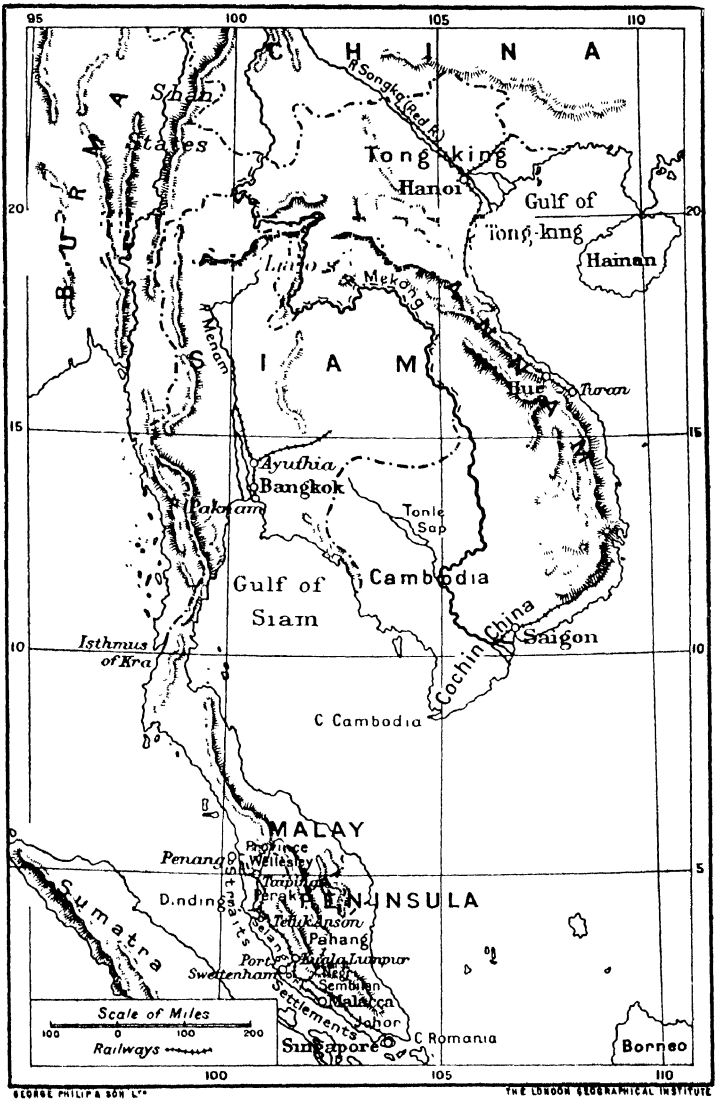
RIVERS.—The rivers, like those of Burma, have a general direction from north to south, with typical stages.

The **Red River**, in the north-east, rises in China and flows into the Gulf of Tongking. The delta of this river is gradually silting up, and Hanoi, the capital of Tongking, which was once on the sea coast, is now 60 miles inland.

The **Mekong** flows through China and Burma before entering French territory. It forms for a considerable distance the boundary between Siam and Annam. A small tributary near the mouth drains the lake **Tonle Sap.** The delta is extensive, covering nearly the whole of Cochin-China.

The **Menam** flows through western Siam and irrigates one of the great rice-producing areas of the world.

FIG. 77.—MAP OF INDO-CHINA.



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CLIMATE AND PRODUCTIONS.—The situation of Indo-China, and the influence of the monsoons, which bring abundant rains from the Indian Ocean and in a lesser degree from the Pacific, cause the climate of the peninsula to be **hot** and **moist.**

The fertility of the soil, the tropical heat, and the abundant rains, cause a very luxuriant and varied vegetation. A considerable area is covered with dense forests which produce **teak, gum, rubber, bamboo,** and many valuable **timbers.** As in Burma, so in Siam and Tongking, **rice** is the chief crop, and is grown in vast quantities both for food and export. **Cotton, tobacco, indigo, spices,** and **catechu** (obtained from the acacia tree and used in dyeing and tanning) are also largely produced. **Silk** is made in Tongking.

Of minerals, the **tin** of the Malay Peninsula is by far the most important, the mines of the Federated Malay States providing more than half the world's supply of this metal.

PEOPLE.—The people of the north of the peninsula are **Mongols,** and their religions **Buddhism** and **ancestor-worship.** The Cambodians are of **Aryan** origin, and the remains of an ancient civilisation are still traceable. There are only a limited number of true **Siamese** in Siam, the population being a mixture of Chinese, Burmese, and Malays.

The **Malays** of the Malay Archipelago are Muhammadans; there are many immigrants from India.

BRITISH POSSESSIONS.—The Straits Settlements.—These consist of—

1. **Penang,** an island of about 100 sq. miles, lying about 350 miles north-west of Singapore. Incorporated in government with Penang are **Province Wellesley,** a coast strip, 45 miles long, on the mainland opposite the island; and the **Dindings,** a small island and a small coast-strip 70 miles south of Penang.

2. **Malacca,** the largest of the Settlements, a coast region 240 miles north-west of Singapore.

3. The island of **Singapore,** with an area of about 200 sq. miles, at the extremity of the peninsula.

Under the government of the Straits Settlements are also included the **Keeling** or **Cocos Islands,** to the south of Sumatra, and **Christmas Island,** south of Java.

The total area of the Settlements is about 1,500 sq. miles, and the population over 500,000.

The trade of the Straits Settlements is important, the two ports being

Singapore and **Penang**, the former of which has about three times as much trade as the latter. The chief **exports** are **tin, spices,** and **gums,** the products of the peninsula; and the **imports, rice** and **cotton goods** for food and clothing.

The Settlements are a **Crown Colony,** under a Governor whose headquarters are at Singapore. Penang and Malacca have each a **Resident Councillor.**

The town of **Singapore** is one of the leading ports of the world, being situated at the gateway of commerce between the Indian and Pacific Oceans. The harbour is good, and there are no custom duties; there is consequently a great interchange of commodities. The port is growing rapidly, and has a population of about 200,000

STATES UNDER BRITISH PROTECTION.—The **Federated Malay States.**—These consist of 1. **Perak** (pron. Perá), the most northerly, with an area of 6,500 sq. miles and a population of about 350,000.

2 **Selangor,** south of Perak; area 3,200 sq. miles, population about 170,000.

3. **Negri Sembilan** (the Nine States), south-east of Selangor; area 2,600 sq. miles, population about 100,000.

4. **Pahang,** on the eastern side of the peninsula; area 14,000 sq. miles, population about 85,000.

The state of **Johore,** at the south of the peninsula, opposite the island of Singapore, is under British control only with regard to its foreign affairs.

These states are being rapidly developed under British direction. **Tin** is extensively mined, and this is at present the chief industry, as the peninsula supplies the bulk of the world's tin. **Gold** is exported, and many other minerals are found and have still to be developed. **Coffee** and **rubber** are cultivated. The latter promises to be an important article of export, more land being planted every year. Railways are developing.

Each state has a Resident, who is responsible to the Governor of Singapore.

The chief towns are **Kuala Lumpur,** the thriving capital of Selangor, and **Taiping,** each connected with its port—the former with **Port Swettenham** and the latter with **Teluk Anson.**

SIAM.—Although independent of foreign control, and ruled by a king, European influence in Siam is considerable. Each State Department is assisted by a European adviser, many of whom are British.

The natural resources are being rapidly developed, and **rice, teak,** and **tin** are exported, the first named in very large quantities. The trade is carried on between Bangkok and Singapore, whence the goods are transhipped.

It is believed that parts of the country are rich in minerals, and steps are being taken to ascertain the extent of the mineral wealth.

Bangkok, the capital, has a population of about 300,000, many of whom

live on the river. Only small vessels can ascend the Menam as far as Bangkok, hence the local trade with Singapore and Hong Kong. Further up the river stands **Ayuthia**, the old capital.

There is only one line of rail—from Bangkok to Paknam, at the mouth of the Menam. Communications are maintained almost entirely by water.

FRENCH POSSESSIONS.—Tongking and **Cochin-China** are directly under French control; **Annam** and **Cambodia** are kingdoms under French suzerainty; the **Laos Territory** consists of three protected native states.

Railways and trade are being developed, and the rivers afford means of internal communication.

The chief exports are **rice** and **silk**. Fishing is carried on, and much **fish** is also exported.

TOWNS.—Hanoi, the capital of Tongking, has a population of about 150,000.

Hue, a port, is the capital of Annam; but **Turan**, further south, has a better harbour and is near a coalfield, so is likely to develop.

Saigon, a considerable port 34 miles from the mouth of the Mekong, is the capital of Cochin-China.

THE MALAY ARCHIPELAGO

GENERAL DESCRIPTION.—This vast group of islands, lying between Asia and Australia, is naturally divided into two distinct parts. If the sea bed were elevated 100 fathoms, these islands would be found to be continuations either of Asia or Australia. The separation between the two continents would then be a deep channel passing between the **islands of Bali and Lombok,** in the Lesser Sunda group, and thence through the **Molucca Passage.** West of this channel the animals and vegetation resemble those of Asia, while to the east they are similar to those of Australia. The **Malays,** who are the principal inhabitants of the islands lying to the west of this channel, are chiefly **Muhammadans** in religion. Formerly their piratical habits caused them to be the dread of the traders to the East.

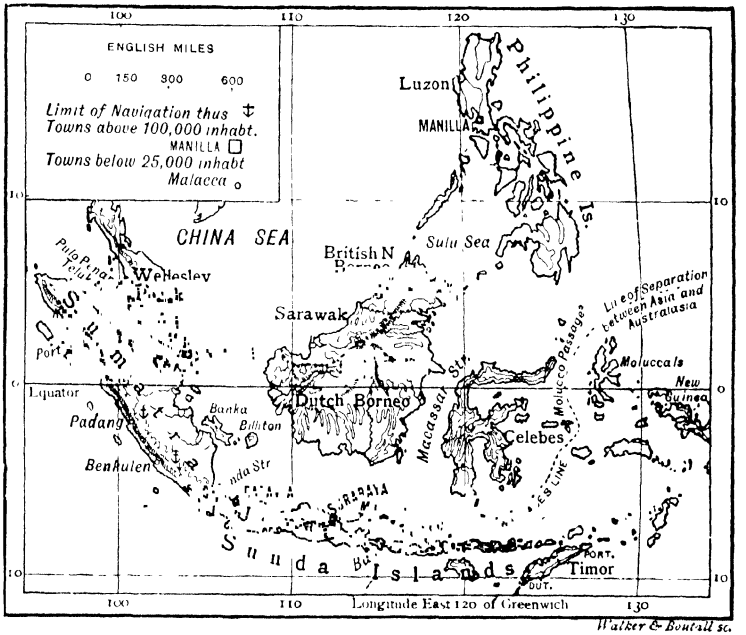
The whole archipelago, which contains the two largest islands in the world (New Guinea and Borneo), is now chiefly under the control of four foreign Powers, the Dutch possessions being by far the most important.

1. The **Dutch** possess **Sumatra, Java, two-thirds of Borneo,** the **Lesser Sunda Islands,** and the **Moluccas.**
2. The **United States** possess the **Philippines.**
3. The **English** possess **North-western Borneo** and **Labuan.**
4. The **Portuguese** possess part of **Timor.**

RELIEF.—All the islands are mountainous, and most of them volcanic. Java is said to contain about forty active volcanoes. Earthquakes are prevalent throughout the archipelago.

CLIMATE AND PRODUCTS.—Lying on both sides of the Equator, and being subject to the influence of the monsoons, **heat** and **moisture** are the characteristic features. The soil is naturally fertile, and vegetation is nowhere more luxuriant.

FIG. 78.—THE MALAY ARCHIPELAGO.



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Forests cover the mountains. **Sago, bananas,** and **coco-nuts** furnish food, while the useful **bamboo** supplies materials for building and domestic purposes. The lowlands produce **coffee, tea, cocoa, sugar-cane, cinchona, tobacco, indigo,** and **spices.** The islands of **Banka** and **Billiton** are noted for **tin,** and **coal** is found in **Sumatra, Borneo,** and **Labuan.**

ISLANDS AND TOWNS.—**Java** is the most populous and productive island in the group. Its **area** (including the island of Madura) is **50,000** sq. miles, and its **population** 26,000,000, over 500 to the square mile. The principal products are **coffee, tea, cinchona, rice, sugar-cane,** and **tobacco. Batavia** (115), the capital, and **Surabaya** are the most important ports.

Sumatra produces **coffee** and **tobacco**, and **gutta-percha** and **camphor trees** are found in great abundance. **Padang**, **Benkulen**, and **Palembang**, all on the south coast, are the chief towns.

Borneo has an area of nearly 300,000 sq. miles, of which about two-thirds belong to the Dutch. North-eastern Borneo is British territory, and there is a British protectorate over the states of **Sarawak** and **Brunei**, along the north coast, and over the island of **Labuan**, off the same coast. The interior of Borneo is inhabited by the barbarous Dyaks. **Tobacco, coffee, pepper, coal, gold,** and **edible birds' nests** are the chief articles of commerce.

Celebes produces **coffee, cocoa,** and **sago**. **Macassar** is the great trading centre of the Eastern Archipelago.

The **Moluccas**, or Spice Islands, produce **cloves, nutmegs,** and **cinnamon.**

The **Philippines** include about 400 islands, large and small. **Luzon** is the largest island, and **Manilla** (270) the chief town. The exports are **Manilla hemp, sugar, tobacco,** and **cigars.**

EXAMINATION PAPERS

A. 1. Give the names and situation of the English and French possessions of Indo-China.

2. What are the chief cultivated crops? Name also the most important forest and mineral productions.

3. Describe a coasting voyage from Rangoon to Hanoi.

4. Account for the importance of Singapore as a port.

B. 1. Which islands of the Malay Archipelago belong geographically to Asia? Give reasons.

2. Name the islands belonging to the Dutch. Which is the most important?

3. What are the chief products of Java, Borneo, the Moluccas, Sumatra, and Celebes?

4. Give the situation of and facts concerning Labuan, Batavia, Macassar, Sarawak, the Molucca Passage.

THE CHINESE EMPIRE

GENERAL DESCRIPTION.—This vast empire occupies the whole of South-eastern Asia from Indo-China to Siberia, and from the Pamirs to the Pacific. The great desert of Gobi and the lofty mountains of the south-western border shut off China Proper from the rest of Asia; hence the people have for ages remained apart from the rest of the civilised world, resisting all attempted intercourse with foreigners, and retaining their own

peculiar civilisation, manners, and customs. It naturally forms one compact country, the people belonging to the **Mongol race**, and most of them following the **Buddhist** religion.

The total **area** of the empire, including its dependencies, is over 4,000,000 sq. miles, while its **population**, according to recent estimates, is about 400,000,000. It is exceeded in area only by the British and Russian Empires, while in population it probably stands first, the most densely peopled portion being **China Proper**.

Between Mongolia and China Proper a remarkable fortification, known as the **Great Wall**, extends for a distance of over 1,200 miles. Its object was to protect the peaceful inhabitants of the fertile south from the marauding Tartar tribes of the north.

COAST-LINE.—The coast-line is extensive. The channel of Formosa leads from the China Sea to the Yellow Sea, and separates the large and mountainous Japanese island of **Formosa** from the mainland. To the east of the Gulf of Tongking lies the extensive island of **Hainan.**

At the northern entrance to the Canton River is the small but important British island of ~~**Hong Kong, a**~~ great commercial centre, with a population of 284,000 inhabitants, and our chief naval and military station in the East. **Victoria** is the chief town. **Macao**, a decaying town on the opposite side of the river, belongs to Portugal.

RELIEF.—The greater part of the empire consists of elevated **plateaux**, reaching in parts of Tibet to a height of 15,000 ft. The only extensive lowland district is the **Plain of Northern China,** extending from the mountains north of Peking to those to the south of the Yang-tse-kiang, and covered with a soil of remarkable fertility known as **loess.**

The two chief **plateaux** are those of **Mongolia** and **Tibet.** Between these districts there extends a great depression known as the **Han-hai,** or Dry Sea. Most of this depression is occupied by the great **Gobi Desert,** stretching from the Pamir Plateau to the Khin-gan Mountains. Towards the centre the desert narrows considerably, and it is at this point that the shortest and easiest route for crossing is to be found.

The **mountains** border and cross the plateaux in various directions. The chief ranges are:—

1. The **Tian-shan**, the **Altai**, and other ranges, partly separate China from Siberia.

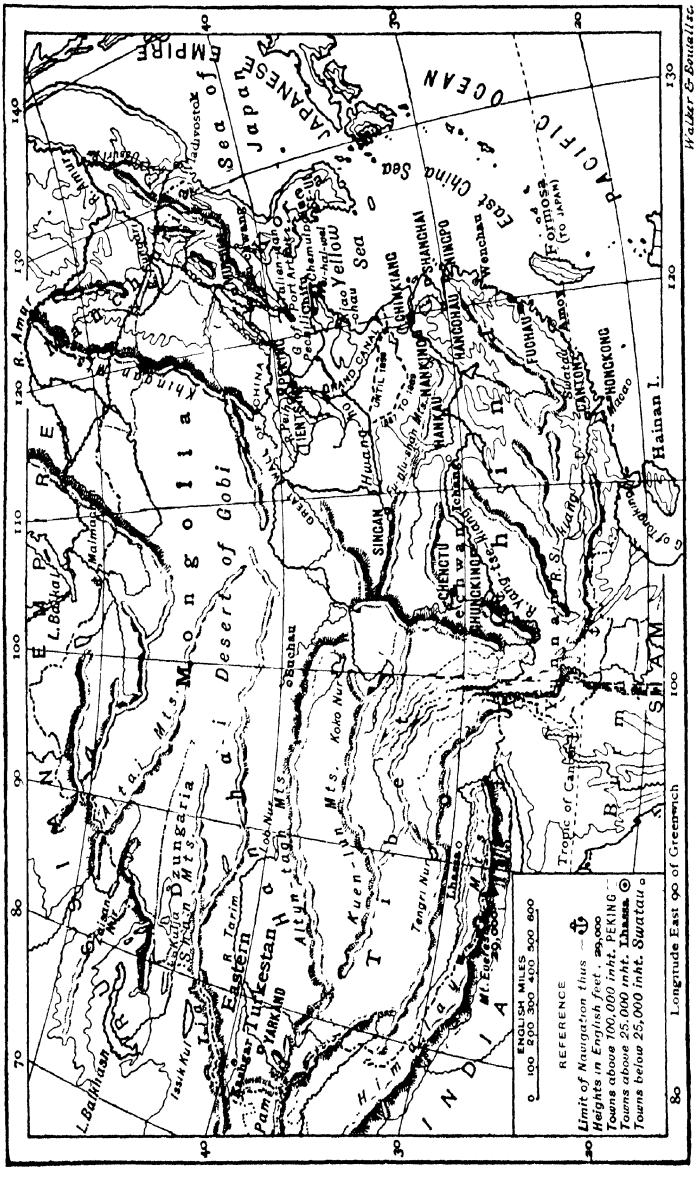


FIG. 79.—THE CHINESE EMPIRE: PHYSICAL AND POLITICAL.

2. The **Altyn-Tagh** border the southern edge of the desert, and are continued to the borders of Manchuria, as the **Khin-gan Mountains**.

3. The **Kuen-lun**, which extend eastward from the Pamirs, and continue into China Proper as a barrier with few openings between the Hwang-ho and the Yang-tse-kiang basins.

4. The **Himalayas** separate Tibet and India.

5. South of the Yang-tse-kiang, ranges which may be regarded as offshoots of the Tibetan Plateau occupy most of the country.

DRAINAGE.—China Proper is drained by four large rivers, all flowing into the Pacific.

1. The **Pei-ho** (*ho* = water), formed by several streams which unite at Tientsin, flows into the Gulf of Pechili.

2. The **Hwang-ho** rises in the Kuen-lun Mountains and flows into the Gulf of Pechili. It is liable to sudden floods and to destructive shiftings of its lower course, sometimes entering the sea to the north and sometimes to the south of the peninsula of Shan-tung. It has occupied its present channel since 1890.

3. The **Yang-tse-kiang** (*kiang* = river), the largest river of China, rises in Tibet, flows for a distance near the Hwang-ho, and discharges itself into the Yellow Sea. It is navigable for ocean steamers to Hankau and for smaller steamers to Ichang, 1,000 miles from the sea. With its tributaries it forms the finest network of waterways in the world.

4. The **Si-kiang** drains Southern China, and is navigable throughout most of its course.

Most of the plateaux drain inland to salt lakes. The Tarim basin is one of the most elevated river basins in the world.

The upper courses of the Ob, Yenisei, Brahmaputra, Indus, and the large rivers of Burma lie within the borders of the Chinese Empire.

CLIMATE.—On the plateaux **hot summers**, followed by intensely **cold winters**, together with **general dryness**, are the characteristic features. China Proper has a much more equable climate. In the north there is a difference of 60° between the summer and winter temperatures (the Gulf of Pechili is frozen over in winter); this difference diminishes to 20° in the south. All along the east coast the **rainfall** is abundant, declining as we proceed northwards. **Typhoons** frequently cause great destruction on the coast of the China Sea.

PRODUCTS.—Trees are scarce on the plateaux, and in China Proper they are cut down to make room for cultivation. The rich **yellow soil** of the northern plain, and the equally fertile **red soil** of Sechwan and Yunnan in the middle course of the Yang-tse-kiang, produce most abundant crops.

1. **Vegetable.**—**Rice, millet, wheat, barley, maize, sugar, opium,** and the **mulberry** are among the chief objects of cultivation. Medicinal **rhubarb** is largely grown in the upper basin of the Hwang-ho. **Ginseng,** which yields a highly prized drug, is grown in Manchuria.

2. **Mineral.**—China has vast stores of undeveloped mineral wealth. Her **coalfields** are among the most extensive and richest in the world, but are very little worked. There are also rich deposits of **iron, copper, salt,** and **china-clay.** The porcelain made from the last mentioned has long been famous.

The chief exports are tea and silk.

The chief imports are opium and manufactured goods.

TREATY PORTS.—For a long time after the discovery of the sea route to China foreign trade was confined to Canton (800) on the Si-kiang, but the right to trade at other ports along the coast has gradually been acquired until at the present time more than forty ports are open to foreign vessels. These are known as **Treaty Ports.** Among the more important of these may be mentioned **Shanghai** (620), near the mouth of the Yang-tse-kiang, which far exceeds all the other ports in the amount of its exports and imports; **Chungking, Ichang, Hankau** (850), trading centres on the Yang-tse-kiang; **Tientsin** (700), on the Pei-ho, the port of Peking; **Swatau, Amoy, Fuchau** (600), **Ningpo,** and **Chifu,** on the coast; **Niuchwang,** in Manchuria.

DIVISIONS AND TOWNS.—The Chinese Empire has six main divisions—**Manchuria** and **Mongolia** in the north; **Dzungaria** and **Eastern Turkestan** in the west; **Tibet** in the south-west; and **China Proper** (nearly one-third of the whole area) in the south-east.

There is a very large number of populous towns.

1. **China Proper.**—**Peking,** the capital, consists of two parts, a Manchu inner part, containing the Emperor's palace, temples, &c., and a Chinese outer part. It is situated in the densely populated province of Pechili, and is said to have a population of nearly one million. **Nanking,** a former capital, on the Yang-tse-kiang, has suffered greatly from rebellions. From **Hangchau,** on an inlet to the south of the Yang-tse-kiang, the Grand Canal runs 700 miles through the plain of Northern China to **Tientsin. Singan,** on a tributary of the Hwang-ho, and **Chengtu,** in Sechwan, are each said to have a population of a million inhabitants.

2. **Manchuria** has suffered from the consequences of the recent Russo-Japanese war. **Mukden** (200) is the capital.

3. **Mongolia** consists mostly of deserts, and is inhabited by nomadic Mongols. **Maimachin,** on the Russian frontier, is the most important town.

4. **Dzungaria.**—**Kulja,** the centre of an exceedingly fertile but thinly peopled district, is the chief town.

5. **Eastern Turkestan.**—**Yarkand** and **Kashgar**, starting places for caravans crossing the Pamirs, are the two most important towns.

6. **Tibet.**—**Lhassa**, the capital, is the residence of the Dalai Lama, the high priest of the Buddhists.

PEOPLE, RELIGION, AND GOVERNMENT.—The Chinese belong to the **Mongolian** type, of which they are the chief representatives. The **language** is monosyllabic, there being a separate character for every root idea, and no inflexions.

The people are professedly **Buddhists** by religion, but **'ancestor worship'** is universally followed, the moral precepts of **Confucius** being held in high repute. The centre of Buddhism is in Tibet, the Dalai Lama residing at Lhassa. There are also about 3 crores of **Muhammadans** in China, chiefly in the east and north-west. **Education** is held in great esteem, all Government officials being appointed on the results of examinations.

The **government** is a pure despotism, the Emperor being the head of the State and the State religion. The nineteen provinces into which China Proper is divided are governed by viceroys, who are mandarins of the highest rank.

KOREA

Korea is a mountainous peninsula lying between the Yellow Sea and the Sea of Japan. It has an **area** of 82,000 sq. miles (compare with Haidarabad State) and a **population** of about 10,000,000. It was formerly tributary to China, but the China-Japan war of 1894 resulted in the recognition of its independence. Russia, anxious to get an outlet on the Pacific in temperate latitudes, threatened Japan's supremacy, and the treaty of 1905, drawn up after the Russo-Japanese war, while retaining Korea's independence, recognised the paramount interest of Japan.

The people are of the Mongolian race, and follow the same religions as the Chinese.

Se-ul is the capital, and **Chemulpo**, near the capital, the chief port.

Ginseng (a Government monopoly) is the chief product and **export**, and British **manufactured cotton** the chief **import**.

THE JAPANESE EMPIRE

GENERAL DESCRIPTION.—**Japan**, or Nippon, as the Japanese term it, is an island empire, commencing from the

peninsula of Kamchatka in the north, and extending as far as and including Formosa in the south. It comprises—

1. The **Kurile Islands**, stretching across the entrance to the Sea of Okhotsk.

2. The southern half of the island of **Sakhalin**, ceded by the treaty of 1905.

3. The group of islands lying to the east of and enclosing the Japan Sea, and comprising the four large islands of **Hokkaidô** (**Yezo**), 36,000 sq. miles; **Honshiu**, 87,000 sq. miles; **Kiushiu**, and **Shikoku**.

4. The **Riu-kiu** (Lu-chu) Islands, enclosing the Yellow Sea.

5. **Formosa**, 13,500 sq. miles, acquired by Japan from China in 1895.

The Japanese Empire thus stretches over about **28 degrees of latitude**, or nearly 2,000 miles, and has an **area** of about 176,000 sq. miles. The **population** is about 44,000,000, most of whom inhabit the islands of Honshiu (Hondo), Kiushiu, and Shikoku. Hokkaidô is inhabited by a scanty coast population, chiefly engaged in fishing.

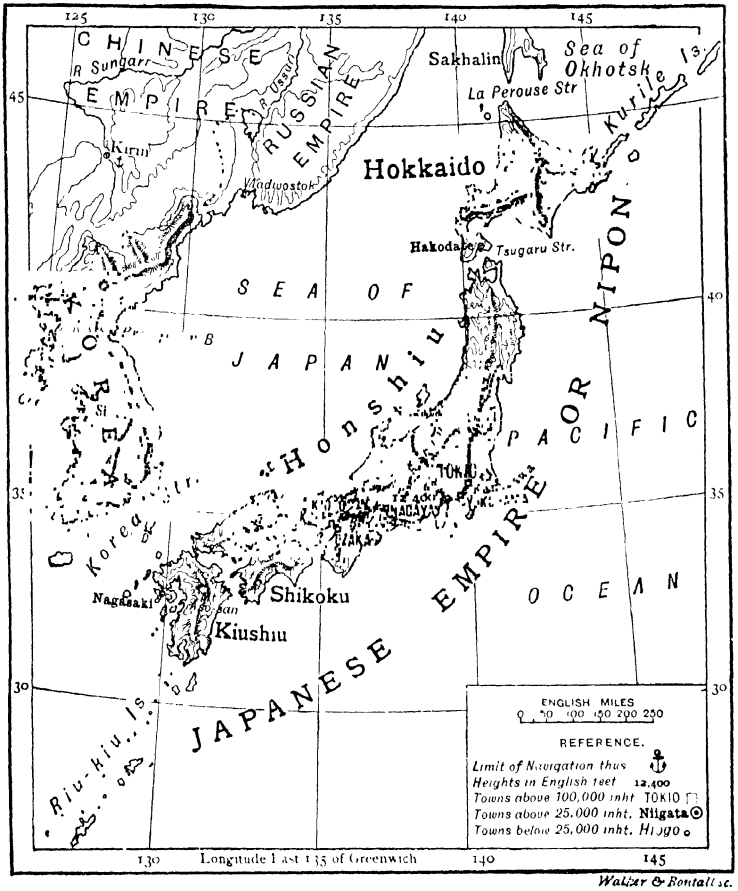
COAST-LINE.—The coast is extensive, with many small inlets forming good harbours. The three principal **straits** are: **La Pérouse Strait**, separating Sakhalin from Hokkaidô; **Tsugaru Strait** (Sangar), between Hokkaidô and Honshiu; and **Korea Strait**, separating Japan from Korea.

RELIEF.—The whole group is very **mountainous**, most of the peaks being active volcanoes. **Fujiyama**, the highest, exceeds 12,000 ft. Owing to the mountainous character of the surface, the rivers are useless for navigation, and bring down so much débris that they choke up the harbours into which they flow.

CLIMATE.—Japan extends for nearly 2,000 miles from north to south, and the islands lie in the temperate zone; they are very mountainous in character; the prevailing winds blow from the Pacific Ocean; the northern islands are washed by a cold current from the Arctic Ocean, and the southern ones by the warm Japan Current (**Kuro Siwo**). These facts account for the diversity of the climate, generally cold in the north and warm in the south. The mountainous backbone, the warm Kuro Siwo, and the prevailing east winds render the eastern coasts warmer and wetter than the western.

PRODUCTS.—The rich volcanic soil, the warm summers, and the abundant rains render the lowland districts exceedingly productive. Owing to the mountainous character of the surface,

FIG. 80.—JAPAN: PHYSICAL AND POLITICAL.



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less than one-third is available for cultivation; but this is tilled with such great care and skill that a dense population (270 to the square mile) is supported.

1. **Vegetable.**—**Rice** is the chief food plant, but crops of **wheat, barley,** and **millet** are also extensively grown. Other important products are **tea, silk, cotton,** and **tobacco.** The chief trees are the **camphor, gum-varnish, mulberry,** and **bamboo.** Forests, chiefly of conifers, cover the mountain sides.

2. **Mineral.**—**Coal, iron, copper, antimony, silver, gold, sulphur,** and **china-clay** are abundantly distributed.

MANUFACTURES.—Japan is making great strides in manufacture, the Government encouraging the establishment of machine industries. There are large **steel** works, **cotton** and **silk** goods are manufactured, and the existence of timber and sulphur has led to an important industry in **matches. Bronze-work, porcelain,** and **lacquer-work** are renowned.

EXPORTS.—The chief **exports** are **silk, tea, rice, coal, porcelain, lacquered ware,** and **camphor.**

IMPORTS.—The chief **imports** are **cotton** and **woollen goods, sugar, petroleum, machinery,** and **ships.**

TOWNS.—The capital is Tokio (1,452), a city of vast extent, situated on the largest plain in Honshiu. It manufactures bronzes and lacquered ware, and is a treaty port. **Yokohama** (194) and **Kanagawa** are also treaty ports on the same bay. The former is the most important seat of European trade. **Kioto** (353), the ancient capital, is the chief centre of learning, art, and religion in Japan, and manufactures bronzes and porcelain. **Osaka** (821) and **Kobe** are both impor[illegible] **Nagasaki,** a treaty port on the island of Kiushiu, has a [illegible] harbour, with a coalfield close at hand. **Niigata** is the only treaty port on the north coast of Honshiu. **Hakodate** is the chief treaty port of Hokkaidô.

PEOPLE AND GOVERNMENT.—The people belong to the **Mongol** race, and are mostly **Buddhists** in religion. They are brave, lively, courteous, and quick in acquiring knowledge. Like the Chinese, they showed the same jealousy of foreign intercourse and had attained a high degree of civilisation before coming into contact with Europeans. Lately, however, a remarkable change has taken place. Schools and colleges on European models have been established, railways have been laid down, factories have been built, and Japanese youths have been sent to foreign countries to be educated.

The ruler of the Japanese is called the **Mikado,** and recently a constitutional form of government, similar to that of European countries, has taken the place of the old despotic system.

EXAMINATION PAPERS

A. 1. Give the approximate area and population of China. Give any reasons why the Chinese have been so long isolated from the rest of the civilised world.

2. Where is the Han-hai? Describe its surface, and say where it can be most easily crossed.

3. Show how the mountains of China mostly start from the Pamir Plateau.
4. Describe the four chief rivers of China.

B. 1. Why is the climate of the plateau so extreme?
2. What are the chief agricultural products of China? What do you know of the 'yellow soil' and 'red soil'?
3. What districts produce rice, rhubarb, ginseng, tea, bamboo, china-clay?
4. What are the 'treaty ports'? Give the names and situation of the principal.

C. 1. Give the situation, and say what the following are noted for:—Yarkand, Maimachin, Lhassa, Tientsin, Macao, Hainan, Mukden, and Se-ul.
2. Compare the people of China with those of Japan.
3. Give the names and situation of the chief Japanese islands.
4. Why are the chief seaports of Japan situated on the eastern side of the islands?

D. 1. What are the principal products of Japan, and why is the population of the southern large islands so dense?
2. Give some account of recent changes in Japan.
3. In what industries do the Japanese excel? Where are they carried on?
4. Account for the variety of climate in different parts of the Japanese Empire.

ASIATIC RUSSIA

GENERAL DESCRIPTION.—The whole of Northern Asia, from the shores of the Arctic Ocean to the borders of the Chinese Empire, Afghanistan, Persia, and Turkey, is under the rule of the Czar. Throughout this vast dominion, which embraces more than one-third of the continent, the Russians have already become the most important element of the population, the two principal occupations—**agriculture** and **mining**—being chiefly in their hands. The native races are in most cases gradually decreasing; **stock-rearing** on the steppes and upland regions, and the **hunting** of fur-bearing animals in the forest regions, are their most important pursuits.

Asiatic Russia is divided into three distinct regions, having an approximate **area** and **population** as follows:—

1. **Siberia,** 5,000,000 sq. miles, 5,720,000 inhabitants.
2. **Russian Central Asia,** 1,600,000 sq. miles, 8,000,000 inhabitants.
3. **Caucasia,** 180,000 sq. miles, 9,000,000 inhabitants.

COAST-LINE.—The north coast is blocked with ice for most of the year, and there is little or no communication with the great rivers which flow into the Arctic Ocean. On the east coast the large island of **Sakhalin** is used by the Russians as a convict settlement. The most important harbour is **Vladivostok,** a naval station on the Sea of Japan, the only port which is open for more than half the year.

1. SIBERIA

RELIEF.—The surface of Siberia consists of a **vast plain** in the north and west, sloping towards the Arctic Ocean, and of **tablelands** and **mountain ranges** in the south and east.

The southern mountain system consists of several ranges intersected by river valleys. The principal ranges are the **Altai** (11,000 ft.), **Yablonoi,** and **Stanovoi Mountains.**

Towards the east this system is continued along the peninsula of Kamchatka by a lofty range containing many active volcanoes.

Between Europe and Asia are the **Ural Mountains.**

RIVERS AND LAKES.—The rivers of Siberia, with the exception of the Amur, flow into the Arctic Ocean, hence, although of great size, they are of small importance commercially. In addition, the navigation, even of their upper courses, is blocked by ice for nearly half the year. There are **four great rivers** :—

1. The **Ob** (2,600) rises in the Altai Mountains, and with its great tributary the **Irtish** drains the whole of Western Siberia.
2. The **Yenisei** (2,900) rises in the Mongolian Plateau. Its chief feeder, the **Angara,** drains **Lake Baikal,** the largest fresh-water lake in Asia.
3. The **Lena** (2,500) rises near Lake Baikal, and forms an extensive delta at its mouth.
4. The **Amur** (2,300) rises in the Stanovoi Mountains, and flows eastward through a fertile region to the Sea of Okhotsk.

The Amur, being free from ice for half the year, is likely to become of greater importance than any of the Siberian rivers.

CLIMATE AND RAINFALL.—The characteristic features of the climate of Siberia are **dryness** and **excessive cold.** The winter lasts for nine months, and during the greater part of the year the ground is covered with snow. In the tundras of the extreme north the soil is always frozen a little distance below

the surface. The excessive cold prevents much evaporation, and thus the scanty rainfall which falls during the short, hot summer enables good grain crops to be raised in the valleys of the south. The range of temperature is most remarkable. Around Yakutsk the difference between summer and winter temperature is over 100°, while in corresponding latitudes on the coast of Norway the difference is not more than 25°. The south-eastern is the only district where the rainfall is abundant.

PRODUCTS.—In the southern region good crops of **grain**, especially **wheat**, are raised. **Furs** are the most important product of the forest region; while **fossil ivory** is obtained from the desolate tundras. On the steppes and upland regions, large herds of **horses**, **fat-tailed sheep**, and **camels** are reared. Siberia is also rich in **minerals**, of which **gold** is the most important. The chief goldfields are situated in Eastern Siberia. **Silver, graphite, iron, lead, copper,** and **coal** are widely distributed, but are not worked to any great extent.

Means of Communication and Towns—The **rivers** are available for traffic only in summer. A **railway** now runs across Siberia from Ekaterinburg to Vladivostok and Port Arthur.

Irkutsk is the capital of Eastern Siberia, and **Omsk** of Western Siberia.

Kiakhta is a town with important trans-frontier trade with China, the tea, silk, &c., of that country being exchanged for the ivory, furs, &c., of Siberia.

2. RUSSIAN CENTRAL ASIA

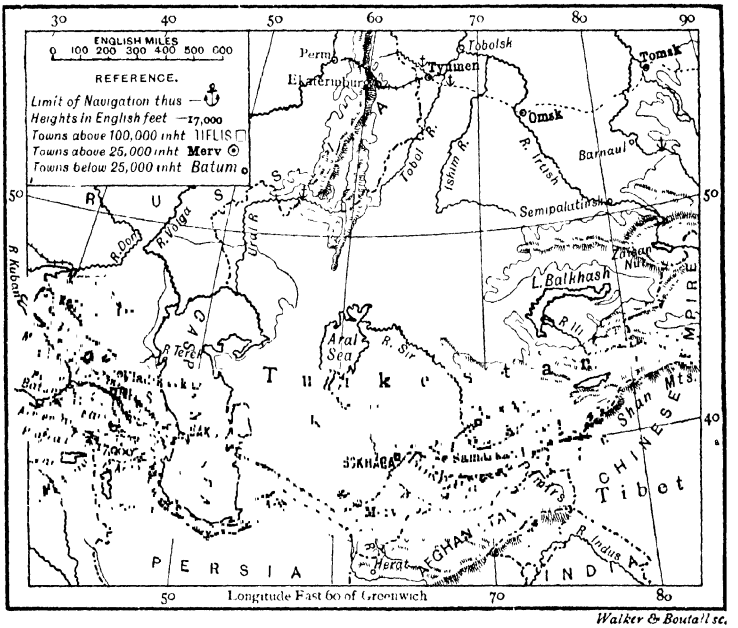
POSITION.—This large district extends from the Caspian Sea westwards to the frontiers of the Chinese Empire, and from Persia and Afghanistan northwards to the neighbourhood of Omsk.

RELIEF.—The surface of Russian Central Asia consists of an **elevated region** in the south-east, and a **lowland plain**, sloping towards the depression occupied by the Caspian Sea. The **highland region** rises in the east to the **Pamir Plateau** and the **Tian-shan Mountains**, some of the peaks being 25,000 ft. high. The **lowlands**, consisting mostly of desert steppes, contain the largest depressed area in the world; the Caspian Sea, which occupies the lowest part, being 84 ft. below the level of the Black Sea. Numerous salt lakes, of which the **Caspian Sea**, the **Sea of Aral**, and **Lake Balkhash** are the largest, are distributed over this plain.

These salt lakes may be regarded as the remnants of the vast inland sea which formerly communicated with the Black Sea on one side and the Arctic Ocean on the other.

CLIMATE, PRODUCTS, AND PEOPLE.—The climate is, on the whole, **exceedingly dry.** In some parts of the western steppes rain sometimes does not fall for several years. The **summers** are **very hot,** while the **winters** are **intensely cold.** The melting of the snow and the slight rainfall on the Tian-shan

FIG. 81.—CENTRAL ASIATIC RUSSIA.



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feed the rivers, which supply the water for **irrigation,** without which cultivation would not be possible.

Agriculture is carried on in the valleys of the south-east and by the river courses. **Grain crops** and **fruits** of excellent quality are produced. **Cotton** is the most important commercial product, and is largely cultivated by the **Usbegs** of Khiva and Bokhara. The **Kirghiz** of the northern and the **Turkomans** of the southern steppes rear great numbers of **horses, cattle, sheep,** and **camels.**

RIVERS AND TOWNS.—The rivers all drain inland; some into salt lakes, while others are dried up in the desert. The towns are the centres of cultivated oases, and depend upon the rivers for their water-supply.

1. The **Amu** (1,300) rises in the Pamir, supplies the dependent States of Bokhara and Khiva with water for irrigation, and flows into the southern end of the Sea of Aral. **Khiva** is a small town, only important as the centre of a cotton-producing district.

2. The streams which supply the oases of **Samarkand, Bokhara**, and **Merv** with the water on which their fertility depends, formerly drained into the Amu, but are now dried up in the desert.

3. The **Sir** rises in the Tian-shan, and flows into the northern end of the Sea of Aral. **Khokand** (54) is an important trading centre, and **Tashkent** (121), the largest town in the district, is the centre of the Russian administration.

4. The **Ili** drains a fertile valley and flows into Lake Balkhash.

The most important **means of communication** is the Trans-Caspian Railway, which extends from the Caspian to within a short distance of Chinese territory.

3. CAUCASIA AND ARMENIA

POSITION.—Caucasia consists of the neck of land lying between the Black and Caspian Seas, and including the regions lying immediately north and south of the great Caucasus Range.

RELIEF.—The surface consists of—

1. **The Northern Steppes**, a continuation of Southern Russia as far as the Caucasus Mountains.

2. **The Caucasus Mountains**, of which the highest peak is Mount Elburz, 18,000 ft. Near its centre, the range is cut into two parts by the Gorge of Dariel, through which road communication from north to south is maintained.

3. **The Armenian Plateau.**—The highest peak, Mount Ararat, is situated at the junction of the Russian, Turkish, and Persian Empires.

CLIMATE, PRODUCTS, AND PEOPLE.—North of the mountains (Cis-Caucasia) the climate is dry and cold. Good crops of **cereals** can be raised wherever water is procurable. A considerable portion of this district is only inhabited by nomadic Tartar tribes. The settled inhabitants are chiefly Russians. The southern side of the mountains is warm, abundant rains fall on

the portion facing the Black Sea, and the vegetation of this district is therefore most luxuriant, **fruits** of various kinds, especially **grapes** and **stone fruits**, growing in great perfection. The Armenian Plateau is much colder and drier, and the people are chiefly engaged in pastoral pursuits.

The chief products of this region are the **minerals**. **Petroleum** is the most important; vast quantities are sent from **Baku**, both by ships on the Caspian and by rail to **Batum**, whence it is shipped to other countries. Rich deposits of **manganese, copper, iron, coal,** and **salt** also exist.

The valleys of the Caucasus are inhabited by a number of tribes, of whom the **Georgians** of the Kur Valley are the most important. The **Armenians** of the south are the great traders of the surrounding districts and profess an ancient form of Christianity.

TOWNS.—**Tiflis** (160), the capital, stands at the southern end of the high road through the Gorge of Dariel, and midway along the line of rail between the Caspian and Black Seas. It is therefore an important trading centre.

Baku (112), the centre of the petroleum trade, is at the Caspian end of this railway line, and **Batum**, the port from which the oil is exported, at the Black Sea end.

EXAMINATION PAPERS

A. 1. Give the approximate area and population of the three great divisions of Asiatic Russia.
2. Describe the surface of Siberia.
3. Account for the extreme coldness and dryness of the climate of Siberia.
4. Mention the great rivers of Siberia. State where they rise, and indicate the extent of their basins.

B. 1. What are the principal products of—(1) the steppes, (2) the forests, (3) the southern valleys, (4) the tundras?
2. Describe the railway systems of Asiatic Russia.
3. Give the situation, and say what you can of Kiakhta, Irkutsk, Omsk, Lake Baikal, Ekaterinburg.
4. How would you account for the numerous salt lakes of Russian Central Asia? Name the chief.

C. 1. Why is the district east of the Caspian extremely dry?
2. Where do the rivers originate which flow into the Sea of Aral?
3. Where and how is agriculture carried on in Russian Central Asia, and what are the chief centres?
4. Describe the surface of Caucasia.

D. 1. Where are—(1) the vegetable, (2) the mineral products of Caucasia most abundant?

2. Describe the most important means of communication in Caucasia and Russian Central Asia.
3. Why are the following important:—Batum, Baku, the Gorge of Dariel, Tiflis, Tashkent?
4. Where are the following peoples found:—Kirghiz, Armenians, Georgians, Usbegs, Turkomans?

ASIATIC TURKEY

GENERAL DESCRIPTION.—The Turkish Empire in Asia includes Asia Minor, part of Armenia, Mesopotamia, Syria, and the portions of Arabia bordering the shores of the Red Sea and the Persian Gulf.

In the south and west the nomadic Arabs and Kurds are, in many cases, almost independent of the Sultan. The neglect of irrigation works, and the apathy and misrule of the Turks have caused many districts once well cultivated and densely peopled to become barren wastes, roamed over by a scanty population of wandering tribes.

The whole country possesses great historical interest. Syria was the seat of the ancient Jewish and Syrian monarchies, while Mesopotamia was the centre of the mighty Assyrian, Babylonian, Persian, and Arabian Empires when at the height of their power. Nineveh, Babylon, Sidon, Tyre, Ephesus, and many other cities, once famous, are no longer inhabited, while several existing cities have greatly declined from their former prosperity.

AREA.—The area is nearly **695,000 sq. miles.**

COAST-LINE.—The coasts of the Black Sea and Syria are comparatively unbroken, with few good harbours. The west coast of Asia Minor is more broken, and is studded with numerous fertile islands of great beauty.

Cape Baba is the most westerly point of Asia, and the **Gulf of Smyrna** is the most important opening.

The island of **Cyprus** has been under British administration since 1878. **Nicosia** is the capital and **Larnaca** the chief port. Wine, corn, and cotton are among its chief products.

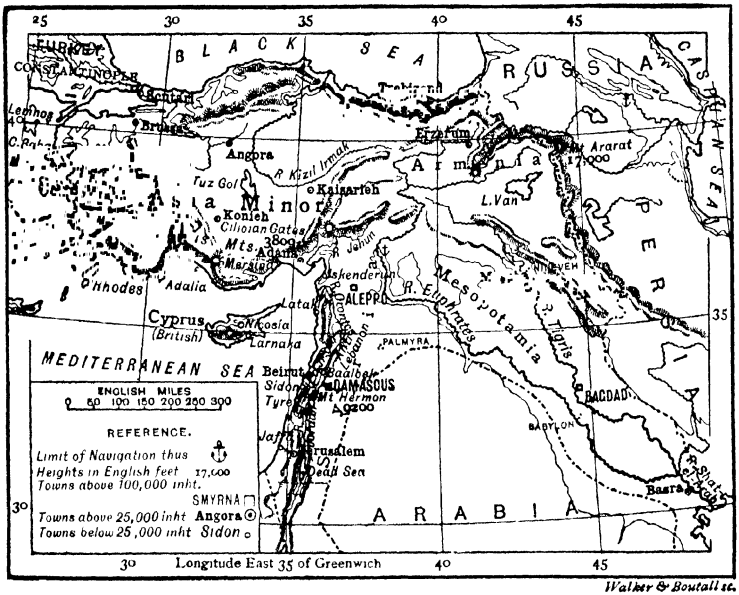
RELIEF.—The physical regions of Asiatic Turkey are—

1. The **lowland plain of Mesopotamia,** which is continued southward along the western shores of the Persian Gulf. Meso-

potamia was once one of the most fertile and populous districts of the world, but now, owing to the neglect of the irrigation works, it is very little cultivated, and possesses a scanty population depending chiefly upon the produce of their flocks and herds.

2. A **highland region,** consisting of the **Plateaux of Asia Minor, part of Armenia,** and **Syria.** The plateau of Asia Minor is bordered by mountains on the north and south. Towards the west valleys of great beauty and fertility open towards the Ægean

FIG. 82.—ASIATIC TURKEY: PHYSICAL AND POLITICAL.



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Sea. The centre of the plateau is occupied by an extensive salt steppe, containing many salt lakes. The **Taurus Mountains** on the south rise to a height of 13,000 ft.

The **Armenian Plateau** is more elevated than that of Asia Minor, and is crossed by mountain ranges, the highest point of which is **Mount Ararat,** 17,000 ft.

In **Syria** two parallel mountain chains, **Lebanon** and **Anti-Lebanon,** 10,000 ft. high, trend southwards, and are continued through Palestine to the mountains of Sinai and Arabia. Between

these ranges is a trough, the southern part of which forms the most remarkable depression in the world, the Valley of the Jordan. In the lowest part of this depression lies the Dead Sea, the surface of which is nearly 1,300 ft. below that of the Mediterranean. The eastern portion of Syria is a sandy desert extending into Arabia.

The **Red Sea coast-strip** consists of a narrow plain, backed by a range of low mountains which form the edge of the Arabian tableland. (See under Arabia, page 181.)

RIVERS.—The position of the mountains and the deficient rainfall cause the country to be poorly supplied with navigable rivers. The chief are :—

1. The **Euphrates** (1,800) and **Tigris** (1,100). Both rise in Armenia, flow through Mesopotamia, and after uniting in one stream, the Shat-el-Arab, enter the Persian Gulf.

2. The chief river draining into the Black Sea is the **Kizil Irmak**, and

3. Of those draining into the Mediterranean, the chief is the **Orontes.**

4. A large part of Turkey in Asia drains **inland.** In Armenia, **Lake Van** receives the drainage of a beautiful basin, and in Asia Minor many streams flow into salt lakes. In Syria the **Abana** rises in the Lebanon Mountains, and after supplying the fertile oasis of Damascus drains into a shallow lake. The **Jordan** rises in Mount Hermon, flows through the **Sea of Galilee**, and empties itself into the **Dead Sea**, an intensely salt lake about 50 miles in length.

CLIMATE.—The climate is exceedingly varied. On the plateaux of Asia Minor and Armenia the winters are severe, and the summers excessively hot. In Syria and Mesopotamia the winters are mild, while the summers are exceedingly sultry, the hot winds from the desert scorching up the vegetation. The rainfall is very deficient on the plateaux, but abundant on the Black Sea coasts and parts of the Lebanon Range.

PRODUCTS.—The districts bordering on the Black Sea have a dense vegetation, forests clothe the mountain sides, and a great variety of **fruit trees** grow in abundance.

The valleys near the Mediterranean are exceedingly fertile. **Wheat, barley, sesame** (for oil), **valonia** (acorn cups used for dyeing, &c.), **opium, raisins, figs, olives, gums,** and **cotton,** are important exports; **silk** is a thriving industry on the Lebanons and at Brussa; **tobacco** at Latakieh. Jaffa is noted for **oranges,** and excellent **sponges** are obtained from the Mediterranean coast. From the plateau the **wool** of the fat-tailed sheep, the **mohair** of the Angora goat, and **carpets,** are exported. Mesopotamia produces excellent **dates.**

Means of Communication and Towns.—The bulk of the traffic is still conveyed by camel caravans, but these are being gradually replaced by railways financed by German capital.

The Tigris and Euphrates are important highways. Large steamers can reach Basra, and thence goods are carried by smaller craft for hundreds of miles, as far as the edge of the Armenian Plateau.

Smyrna (200), the most populous town in Asiatic Turkey, is a place of great trade and a railway centre. It possesses a fine harbour.

Beirut is the chief port in Syria.

Damascus (140), the capital of Syria, is situated on a fertile oasis, and is one of the oldest cities in the world.

Jerusalem, which is connected by railway with its port, **Jaffa,** is a city sacred to Christian, Jew, and Muhammadan.

Baghdad (145), once the capital of the Arabian Empire, is still the largest town in Mesopotamia and a river port with considerable trade.

PEOPLE.—The population of Asiatic Turkey is estimated at 24 millions. The **Turks** form the bulk of the inhabitants of Asia Minor, and are chiefly engaged in agriculture. **Arabs** are most numerous in Syria and Mesopotamia. **Greeks** are an important part of the population of the western towns and islands, where they have monopolised the trade and the learned professions. **Armenians,** in a like manner, are the traders of the eastern districts. The warlike **Kurds** are numerous on the eastern boundary. These, with many other peoples, **Syrians, Turkomans, Circassians, Jews,** &c., make up the mixed population under Turkish rule. The Turks, Arabs, Kurds, Turkomans, Circassians, &c., are **Muhammadans.** The Greeks, Armenians, and Syrians are **Christians.**

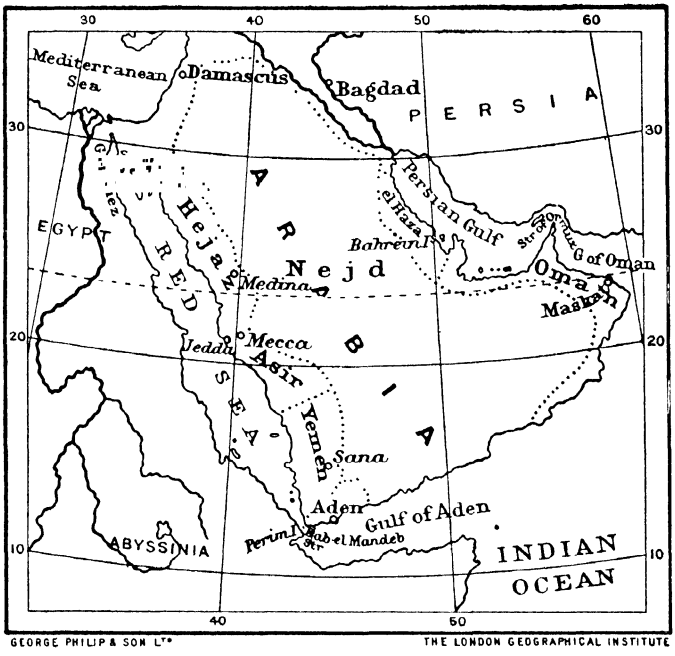
ARABIA

GENERAL DESCRIPTION.—Arabia is a compact country situated at the south-western corner of Asia, and separated from Africa by the long and narrow Red Sea, which for 1,800 miles washes its western shores. Its coast-line is uniformly unbroken; its surface is mostly desert; its climate is uniformly dry, and, except in a few highland districts, exceedingly hot; its products vary but little throughout; and its people, the Arabs, are all of the **Semitic race,** and follow the **Muhammadan religion.** It is the largest peninsula in the world, having an **area** of about 1,000,000 sq. miles; while its **population** is estimated at not more than 5,000,000.

COAST.—There are but few good harbours, and the Red Sea coast abounds in dangerous coral reefs. The most important features are:—The rocky **Peninsula of Sinai,** between the **Gulfs**

of Suez and **Akabah**; the **Strait of Bab-el-Mandeb,** connecting the Red Sea with the **Gulf of Aden**; and the **Strait of Ormuz,** which unites the **Persian Gulf** with the **Gulf of Oman.** The only **islands** of note are **Perim,** which commands the entrance to the Red Sea; and the **Bahrein Islands,** the centre of the pearl fishery of the Persian Gulf.

FIG. 83.—MAP OF ARABIA.



RELIEF.—The surface consists of an extensive **plateau** sloping towards the east, with narrow **lowland strips** on the shores of the Red Sea and Persian Gulf. On the western side of the plateau the mountains follow the coast-line, rising in the peninsula of **Sinai** to a height of 9,000 ft. In the interior the district of Nejd contains many fertile oases; the rest is comparatively unknown desert.

CLIMATE.—The position of Arabia in the tropical latitudes of low pressure, in which also lie the Sahara, the desert regions

of Persia, Baluchistan, Sindh, and Rajputana, together with the fact that the prevalent winds are from the land, account for the extreme dryness and heat of Arabia. The whole peninsula is a nearly rainless district; even in the highlands of Yemen and Oman, which receive moisture from the Indian Ocean, the rainfall is slight, and often long periods of drought occur. There are no rivers; the **wadies**, or watercourses, are dry for most of the year; and when dry the wells which occur along their courses, and the reservoirs in which the water is stored up, are the only means of supply.

PRODUCTS.—The people of the interior are mainly engaged in **pastoral** pursuits, and **sheep**, **goats**, **asses**, **camels**, and **horses** form their chief wealth. The **date-palm** is the most valuable tree. **Agriculture** is carried on in the valleys and coast-strips. Among the productions are **durrah**, a kind of millet, **tobacco**, excellent **fruits**, **coffee** in Yemen, **cotton** in Oman, and **aromatic plants** chiefly in the south and west, such as **frankincense**, **myrrh**, **balsam**, **gum**, &c.

The Arabs are keen traders. Before the arrival of Europeans they monopolised the sea-trade of the Indian Ocean, and their descendants are still found in many parts of the East.

DIVISIONS AND TOWNS.—Arabia may be divided politically into four parts, under Turkish, Egyptian, English, and native rule respectively.

1. **Turkish.**—The provinces of Hejaz (Land of the Pilgrimage) and Yemen on the Red Sea, and El Haza on the Persian Gulf, are under Turkish administration. The principal towns are the sacred cities of **Mecca**, the birthplace of Muhammad, and **Medina**, the place of his burial. Every spring multitudes of pilgrims from all parts of the Muhammadan world visit these towns—some by sea to **Jedda**, the port of Mecca, others by the great pilgrimage and trade routes from Damascus and Baghdad. The largest town in Yemen is Sana (50), situated in a fertile valley and the residence of a powerful emir.

2. **Egyptian.**—The Peninsula of **Sinai** is under Egyptian rule.

3. **English.**—The Island of **Perim**, and the fortified port of **Aden**, with the surrounding district, belong to England. Aden possesses an excellent harbour, and is a place of great commercial importance.

4. **Native.**—The Arabs may be divided into the settled population of the towns and villages and the nomad Bedouins of the desert. Each tribe is under a **sheikh**, and a confederacy of several tribes often acknowledge the supremacy of an **emir**. The most powerful native state is **Oman**, the capital of which is **Maskat** (60), the largest town in Arabia.

EXAMINATION PAPERS

A. 1. What is the extent of the Turkish dominions in Asia? Name the four principal portions.
2. Account for the inland drainage of Asia Minor. What mountains border the plateau?
3. Describe the river system of Mesopotamia.
4. How do the Lebanon Mountains affect the climate of Syria?

B. 1. Account for the fertility of the western valleys of Asia Minor, the Black Sea coast district, and the oasis of Damascus.
2. Give the situation of the chief ports of Asiatic Turkey, and say what exports would be likely to be sent from them.
3. Name the chief races inhabiting Turkey in Asia, and mention the districts which they respectively inhabit.
4. What do you know of the Dead Sea, Lake Van, Smyrna, Nineveh, Basra, the Kurds.

C. 1. Describe the surface and the inhabitants of Arabia.
2. Mention the chief points of interest in a coasting voyage from Suez to Maskat.
3. What are the chief products of Arabia?
4. Describe the political divisions of Arabia, and mention the chief towns in each.

IRANIA

GENERAL DESCRIPTION.—Physically, the area between the Indus on the east and the Tigris on the west, and the basins of the Caspian and Aral Seas on the north, and the Arabian Sea on the south, form one geographical region, consisting of an extensive tableland known as **Irania**, and divided politically into the countries of Persia, Afghanistan, and Baluchistan. The last named has already been dealt with as a part of the Indian Empire.

BOUNDARIES AND AREA.—The plateau is bounded on all sides by its mountainous wall, and has the sea—the Arabian Sea, the Gulf of Oman, and the Persian Gulf—on the south. The Caspian Sea bounds the plateau on the north-west. The **area** is about **a million square miles**, of which 628,000 sq. miles belong to Persia and 215,000 sq. miles to Afghanistan.

RELIEF.—The direction of the ranges which border and cross the plateau is from east to west, except on its eastern edge, where the **Sulaiman and Hala Mountains** run longitudinally.

The northern range is a continuation of the Himalayas, attaining a height of 25,000 ft. in the **Hindu Kush** at its eastern end, and of 19,000 ft. in the **Elburz Mountains** at its western end.

An extensive depression crosses the plateau from north-west to south-east near the centre. **Sandy deserts,** alternating with **salt marshes** (**kavirs**), cover its surface. The northern part of the depression is occupied by the **Great Salt Desert of Khorassan.**

CLIMATE AND RAINFALL.—The plateau of Irania lies a little to the north of the Tropic of Cancer, and, like Arabia and the Sahara, is situated in the vicinity of the belt of low pressure and small rainfall. It is also outside the monsoon region. The climate is therefore exceedingly **dry,** and this accounts largely for the **extremes of heat** in the **lowland** districts and **cold** in the **highlands.**

The only part of the plateau which has a really good rainfall is the north-west, where the vegetation is of almost tropical luxuriance. The monsoon winds deflected by the Himalayas penetrate into Afghanistan, and falls of snow in that country are frequent in winter.

DRAINAGE.—The relief accounts for the direction of the drainage, and the climate for its meagreness. The rivers are few and scantily supplied with water, and were it not for the melting of the snows on the lofty mountain ranges, a much greater part of the country would be desert. Only a small part of the plateau drains to the ocean, the greater part draining inland into **salt lakes** or **swamps.**

1. **Oceanic drainage.**—The **Karun,** which joins the Shat-el-Arab, is the only navigable river; the **Kabul,** from Afghanistan, joins the Indus.

2. **Inland drainage.**—The best-watered part of the plateau is Afghanistan. The **Oxus** forms the boundary for some distance on the north. The **Merghab** and the **Heri Rud** drain into Turkestan, and the **Helmand** into **Hamun Swamp.** In the north-west the **Sefid Rud** and the **Atrek** drain into the Caspian Sea.

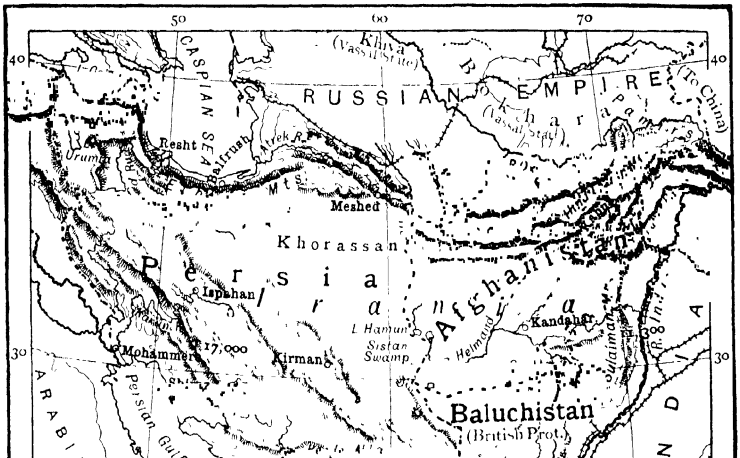
IRRIGATION.—The scantiness of the rainfall, and the small number of rivers render irrigation absolutely necessary over a large part of the plateau. The method adopted is similar to that in vogue in Baluchistan. Water is carried underground in **tunnels** called **karezes,** sometimes for considerable distances.

These are tapped at intervals by means of wells, by which the water is brought to the surface. The karezes are usually but a small distance below the surface.

PRODUCTS.—What few products are grown are tropical in character—**rice, cotton, sugar,** &c.; on the uplands **wheat** and **barley** are grown. **Fruits** ripen to perfection and are found in great variety. **Grapes** are cultivated in Persia, the wine of Shiraz being well known. The **asafetida** plant grows in Afghanistan, the drug being exported.

Sheep, goats, two-humped camels, and **horses** form the chief wealth of the nomadic tribes of the highland regions.

FIG. 84.—IRANIA: PHYSICAL AND POLITICAL.



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PERSIA.—People.—The estimated **population** is about **9½ millions,** or about 15 to the square mile. The people are **Muhammadans,** almost entirely of the **Shiah** sect. The Persians are courteous in manners, and have more cultivated tastes than the majority of Eastern people.

Government.—Persia has recently secured representative government, the **Shah** being the president of **a Legislative Assembly.**

Means of Communication and Towns.—Railways are practically non-existent, the Karun is the only navigable river, and the roads are few and badly made. Transport is therefore difficult and trade backward.

Teheran (250,000), the capital, is situated towards the south of the Elburz Mountains. **Tabriz** (180), near Lake Uramia, is the great trading centre of the traffic between Persia and the Black Sea port of **Trebizond.** **Meshed is** the principal trading centre in north-east Persia. It is regarded by Shiahs as a sacred city. **Ispahan**, a former capital, is situated in a fertile valley south of Teheran. Farther south is **Shiraz**, noted for its wine. The trade of the Persian Gulf is increasing. The principal ports are **Bandar Abbas,** and **Bushire.**

AFGHANISTAN.—People.—The **population** is from **4½** to **5 millions,** who are nearly all **Sunni Muhammadans.** The mountainous character of the country has caused the people to be broken up into tribes or clans, who do not always live peaceably together. The Afghans are a brave, warlike people.

GOVERNMENT.—Despotic—under the **Amir** of **Kabul,** who is, however, assisted in the government by his relatives and by other officials.

Means of Communication and Towns.—Trade in Afghanistan is carried on by road. Three important towns command the great military and trade routes between India and the West. **Kabul** (70), the capital, carries on considerable trade with India by the Khaibar and Kurram Passes to Peshawar and Dera Ismail Khan. **Kandahar,** the chief town in Southern Afghanistan, is now nearly connected with India by the railway which runs through the Bolan Pass. **Herat,** situated in the fertile valley of the Heri Rud, is the most important town of Western Afghanistan

EXAMINATION PAPERS

A. 1. Describe the mountain system of Irania.
2. Show how the mountains affect the climate of Persia.
3. What are the principal articles exported from Persia, and say where they are produced?
4. How is agriculture carried on? Name the most fertile districts.

B. 1. What are the political divisions of Irania, and how is the government carried on?
2. Describe the inland drainage of Irania.
3. What are the chief roads between Persia and India?
4. Give the situation of Bushire, Herat, Kandahar, the Great Salt Desert of Khorassan, Shiraz.

EUROPE

GENERAL DESCRIPTION.—Europe is, with the exception of Australia, the smallest of the great land masses of the globe, but it is exceeded only by Asia in population, and it is first in the civilisation and influence of its inhabitants.

Being situated almost entirely in the temperate zone, and having generally a rainfall sufficient for agriculture, the soil, mostly fertile naturally, has been made very productive by the energy and skill of the people. The abundance of mineral wealth and the inventiveness of Europeans have caused Europe to be the chief workshop of the world, and vast quantities of manufactured goods are exchanged for the productions of other continents. The position of Europe in the heart of the land mass of the Northern Hemisphere, and the [illegible] of its coast-line, enable this exchange of commodities to be carried on with ease. The ancestors of the great bulk of the people of Europe came originally from Asia, but various causes have been acting during very many centuries to produce great differences in their appearance, language, and character as compared with those of kindred stock now resident in Asia.

BOUNDARIES.—**North.**—Arctic and Atlantic Oceans. **West.**—Atlantic Ocean. **South.**—Mediterranean and Black Seas and a tributary of the Kur. **East.**—Ural Mountains and Caspian Sea.

COAST-LINE.—Europe has a more broken coast-line than any other continent. Great openings running far into the land wash the shores of several extensive peninsulas, and cause the length of coast to be very great in proportion to the area. All the coasts are broken by river mouths or other openings; but the western projections of the **British Isles**, **France**, and **Spain**, and the whole of the coast of **Norway**, are remarkable for their very numerous openings. The northern and western coasts are

mostly high and rocky, except the stretch of very low coast from the Skaw, in Denmark, to the coast of France. The part of this coast which borders Holland is even below the sea level. The northern shores of the Mediterranean in Spain and Italy are low, except at the headlands; but the eastern shores in Greece and Turkey are high and bold.

The neighbourhood of the ocean in all Central and Western Europe has had the effect of (*a*) causing the climate to come under the moderating influence of the sea, being subject to less extremes of temperature than other parts of the Northern Hemisphere in corresponding latitudes; (*b*) making the inhabitants take the foremost place in navigation, exploration of distant lands, and in commerce.

PARTS OF THE SEA.—1. **Arctic Ocean.**—The **White Sea**, frozen for many months annually.

2. **Atlantic Ocean.**—The **North Sea**, shallow over nearly the whole of its area, and therefore one of the most celebrated fishing grounds in the world. Further south are the **English Channel** and the **Bay of Biscay.** The **Irish Sea** lies between Great Britain and Ireland. Connected with the North Sea by the **Danish Sound** is the **Baltic Sea**, which is frozen every winter, and therefore less important commercially than it would otherwise be.

The **Mediterranean Sea** is the most interesting inland sea in the world. In the countries bordering this sea civilisation first developed in Europe and spread to the western and northern parts of the continent.

Connected with the Mediterranean Sea are the Sea of **Marmora, Black Sea**, and Sea of **Azof**, forming a chain. The **Dardanelles** is the strait leading from the Mediterranean to the Sea of Marmora. The **Bosporus** joins the Sea of Marmora with the Black Sea. The Strait of **Kertch** leads from the Black Sea into the Sea of Azof.

The Black Sea is less salt than the Mediterranean owing to the number of rivers that flow into it and its remoteness from the ocean.

The **Caspian Sea** is the largest lake in the world (170,000 sq. miles), is salt, and its surface is 84 ft. below sea-level.

ISLANDS.—The coasts of Europe are fringed by great numbers of small islands, and several large island groups are included within the area of the continent. The **British Isles**

are the chief group, and consist of two large islands, **Great Britain and Ireland**, together with many hundreds of lesser islands. This group is separated from the continent by the shallow North Sea, English Channel, and Strait of Dover, and, no doubt, at one time formed a portion of the mainland. The British Isles form the centre and mother country of the greatest empire in the world.

A rising of the sea-bed to the extent of 100 fathoms would cause almost the whole of the **North Sea** and the **English Channel**, together with the **Atlantic Ocean** for from 50 to 200 miles to the west of the British Isles and France, to become dry land.

Corsica and **Sardinia** are large islands in the Mediterranean Sea, and are separated from each other by the Strait of **Bonifacio.** These islands are mountainous and are comparatively thinly peopled.

Sicily is a thickly peopled island separated from Italy by the Strait of **Messina.**

The **Greek Archipelago** is a group of numerous small islands occupying a large portion of the eastern part of the Mediterranean Sea.

In the number and importance of its islands, Europe can only be compared with Asia and North America. Africa, South America, and Australia have but few islands upon their coasts. The European islands are the homes of numerous hardy and industrious fishermen, and supply most of the sailors who carry the commerce of Europe into every part of the ocean.

RELIEF. Europe is, correctly speaking, not a separate continent, but is the westward extension of the great land mass of which Asia is the main portion. The greatest width of the actual unbroken land surface of Europe is at the junction with Asia, and the continent gradually narrows towards the west until it ends in the Spanish Peninsula.

The land surface is easily divided into three portions :—

(*a*) The **Great European Plain,** embracing all Russia, and extending through Northern Germany to France.

(*b*) The **Mountain System** of Europe, occupying Southern and Central Europe from the Black Sea to the Atlantic Ocean, and comprising a great number of ranges.

(*c*) **Scandinavia.**—The great mountainous peninsula of the north.

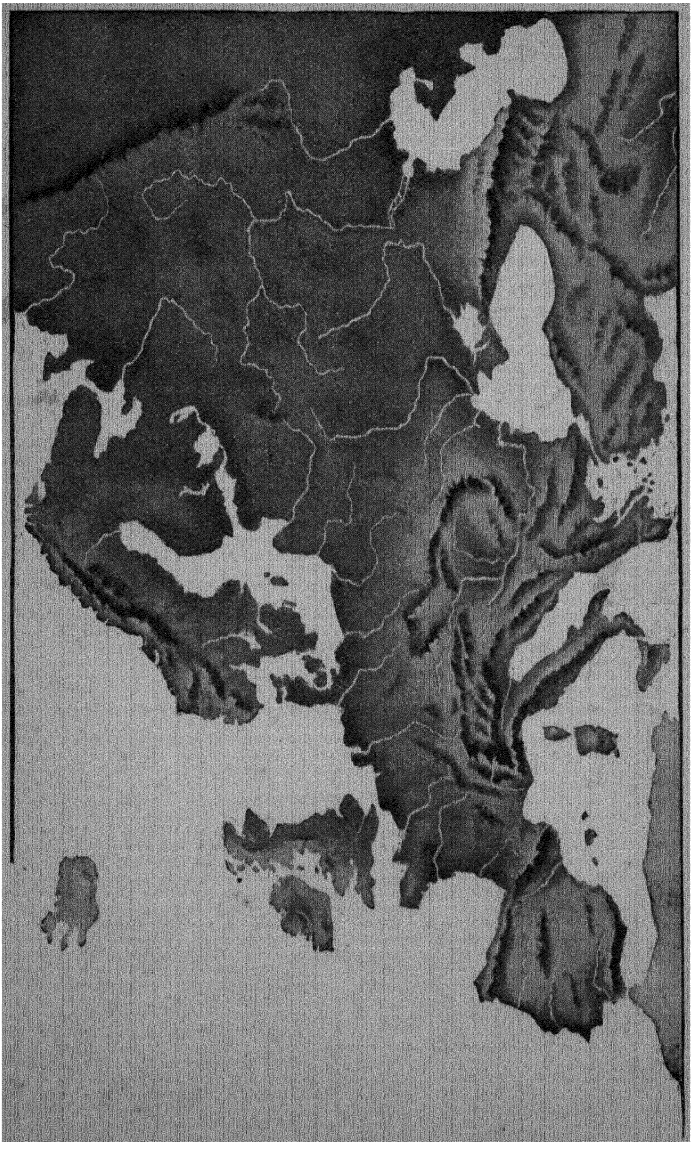


FIG. 85.—RELIEF MAP OF EUROPE.

The **Great European Plain** includes more than half the surface of Europe, and is remarkably level. In Russia it has a very gentle slope to all the bordering seas, and the Russian rivers radiate from the central portion; but in Germany and France the slope is to the north-west, and hence the rivers of those countries have a general direction to the north-west.

MOUNTAINS.—As in Asia the Mountain System radiates from a central mass of high land. The **Alps** form the centre of the system, the ranges running east and west. From the eastern end of the Alps the **Dinaric Alps** skirt the Adriatic Sea into Turkey, where they turn eastwards as the **Balkans.** From this range spurs run to the south, connecting it with the highlands of Greece; and northwards another spur goes to the Danube, which is continued beyond the river as the **Carpathian Mountains**—the range which encircles Austria. The Carpathians terminate in the **Plateau of Bohemia.**

The western end of the Alps turns southwards as the **Apennine Range,** which traverses the whole length of Italy. The **French Highlands** connect in the south with the **Pyrenees,** which separate France from Spain; and in the north with the Jura and Vosges Mountains and the **highlands of South Germany.**

The **Scandinavian Peninsula** is a great plateau, having a very steep front towards the Atlantic, and gradually sloping to the east. This plateau is of great height and is very bleak. Hence the inhabitants live on the eastern slopes and at the foot of the western face. The rivers of this peninsula are very short and swift to the west, but of moderate length to the east. The only considerable river—the **Glommen**—flows from the plateau southward.

COMPARISON OF EUROPE WITH ASIA.—We thus see several points of comparison between Europe and Asia.

1. Both continents have an extensive plain stretching across the north.

2. In both the main mountain systems are in the south, and the ranges run in a general direction from east to west.

3. The systems of both continents radiate from a central mass—the Himalayas in Asia, and the Alps in Europe.

4. This central mass lies to the north of the middle one of three peninsulas which stretch southwards.

5. The western peninsula in each case is a plateau, the middle one has an island to the south, and the western one has an archipelago lying off its shores.

6. An island kingdom, Great Britain, lies to the west of Europe, and another, Japan, to the east of Asia.

7. The climate of these kingdoms is moderated by a warm ocean current—the Gulf Stream in the case of Great Britain, and the Kuro Siwo in the case of Japan.

RIVERS.—The main water-parting in Europe starts at the **French Highlands** and has a general direction to the **north-east** as far as the **Ural Mountains,** maintaining a fairly equal distance from the north coast nearly all the way. The position of this watershed can be clearly seen from the relief map of Europe on page 190. From this water-parting the general direction of the rivers is north and south, the principal exceptions being the Danube and the Po, which flow in an easterly direction. The following are the chief rivers flowing north :—

1. **Into the Arctic Ocean.**—**Petchora** and **Dwina**—commercially unimportant—flow through desolate territory and are ice-bound for months together.

2. **Into the Baltic Sea.**—**Neva, Western Dwina, Vistula,** and **Oder.**—The last mentioned is the most important, being in a more moderate climate than the others.

3. **Into the North Sea.**—**Elbe** and **Rhine.** Both of great commercial importance.

4. **Into the English Channel.**—The **Seine.** Paris, the capital of France, stands on this river.

5. **Into the Bay of Biscay.**—**Loire** and **Garonne.** Both have important ports at the mouth.

The chief rivers flowing south from the great watershed are :—

1. **Into the Caspian Sea.**—**Volga** (2,200 m. long), the longest river in Europe, and the **Ural.**

2. **Into the Black Sea.**—**Dnieper, Don, Dniester.** These rivers have ports at their mouths, but have shallows in the lower parts of their courses. The **Danube** (1,700 m. long), the second river in Europe, is of great importance politically and commercially.

3. **Into the Mediterranean Sea.**—The **Po,** which drains the plain of Lombardy, and the **Rhone.**

Peninsular Rivers.—In Scandinavia and in the Balkan and

Italian peninsulas the rivers are generally short and rapid; in the Iberian peninsula there are several long rivers, but they suffer from the dryness of the climate, are navigable only for a short distance from their mouths, and, lying in deep channels, cannot easily be connected by canals. Of the rivers of the Iberian Peninsula, the **Douro, Tagus, Guadiana,** and **Guadalquivir** flow into the Atlantic Ocean, and the **Ebro** into the Mediterranean Sea.

Very few European rivers form **deltas** at their mouths. The Rhine, Rhone, Po, and Danube bring down a considerable quantity of silt from the mountains, and all form deltas. The Volga has a large delta, but the land bordering the Caspian is very low, and the numerous mouths of the river are due rather to the formation of new channels by overflow than by the deposit of silt.

LAKES.—The chief European lakes lie—(*a*) In the countries adjacent to the Baltic. In **Russia.**—**Lake Ladoga,** the largest in Europe, and **Onega.** In **Sweden.**—**Lakes Wener** and **Wetter.**

These are all of much greater size than those in other parts of Europe.

(*b*) In the **Alpine Mountain System.**—These are of entirely different character from the former, for while the Russian and Swedish lakes lie on low plateaux with no mountains near them, the Alpine lakes occupy deep hollows amongst the mountains, and are of great beauty. Some of the chief are **Geneva, Lucerne, Zurich,** and **Maggiore.**

Lakes of lesser importance are scattered in most of the European countries, but France and Spain are very destitute of lakes.

The **Caspian Sea,** though bordering upon Europe, can hardly be called a European lake.

CLIMATE AND RAINFALL.—Generally speaking, the climate of Europe may be described as **temperate,** and as having less extremes of heat and cold than other parts of the Northern Hemisphere in the same latitude.

The variation of temperature is greater from west to east than from north to south: *e.g.* the shores of the British Isles and of Norway are not ice-bound in winter, while those of the Black Sea, from 20° to 40° further south, are regularly bordered with ice in winter.

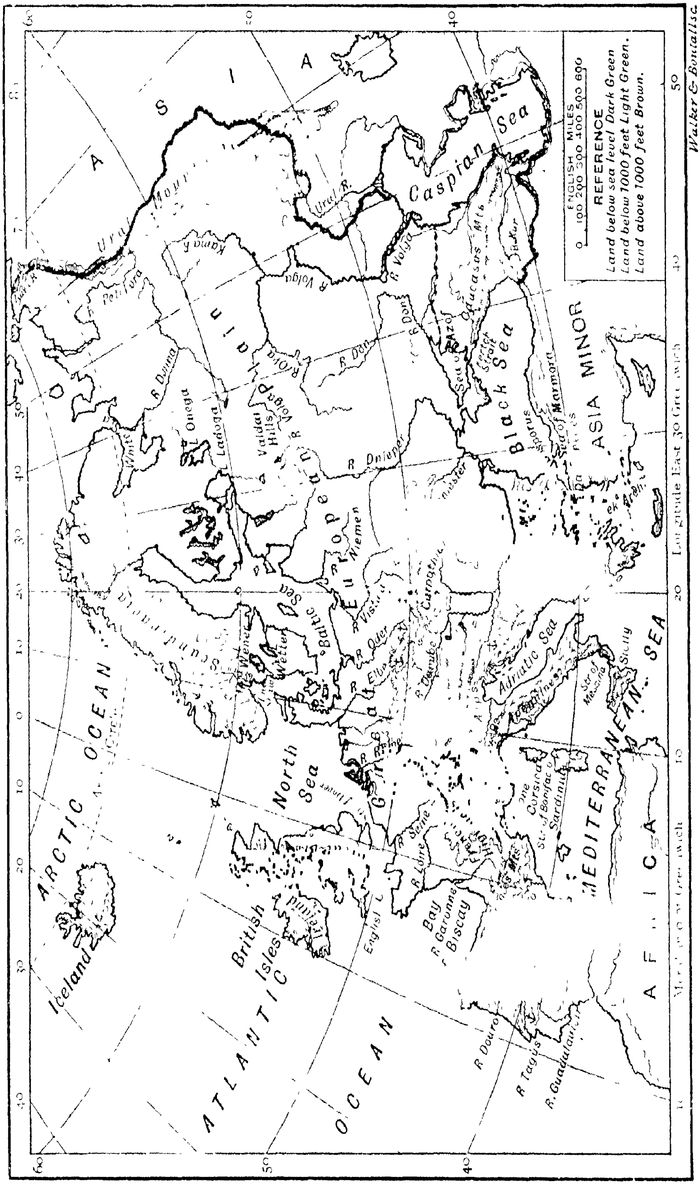


FIG. 86.—PHYSICAL MAP OF EUROPE

Longmans & Co London & New York.

This is due to (1) the influence of the warm ocean winds and currents; and (2) the absence of mountain ranges on the great plain, over which, therefore, the cold north winds and warm south winds have free play.

The **rainfall** throughout the great bulk of the surface is sufficient for agriculture, but certain districts suffer from a scanty rainfall. These are:

1. Much of the **Spanish Plateau**, owing to the high mountains on its borders, which deprive the rain-clouds of moisture.

2. The **south of Italy** and all **Greece** are out of the direction of the Atlantic prevailing winds, and come under the influence of hot dry winds from Africa.

3. The **Hungarian Plain**, owing to its great size and the condensation of rain-clouds on its mountain boundary.

4. The **south-east of Russia**, owing to its remoteness from the ocean.

PRODUCTS.—1. **Vegetable.**—Distinct belts of vegetation are traceable in Europe.

(*a*) The **cold region** of North Russia: This is a continuation of the Siberian **tundras.**

(*b*) The **north temperate region**: The characteristic trees are **pines** and **firs**, of which there is a belt in Scandinavia and across Russia; cultivated plants include **barley**, **oats**, and **rye.**

(*c*) The **central temperate region**: This is the belt of hard-wooded deciduous trees, and stretches from the British Isles to the Urals; typical trees are the **oak**, **beech**, **elm**, and **ash**; cultivated crops are **wheat**, **beet**, and the **vine** in the west, in France and Germany, and **flax** and **hemp** further east.

(*d*) The **south temperate region** borders the Mediterranean. Evergreens are characteristic; the **vine**, **olive**, and many other **fruits** abound; and in the far south, some semi-tropical plants are grown, such as **maize**, **cotton**, **rice**, and **tobacco.**

2. **Animal.**—The common domestic animals are horses, cattle, sheep, and pigs, and mules and asses in the south. Wild animals are numerous in many parts, but Europe is free from the large animals of the cat-tribe, and from large and dangerous reptiles. Snakes exist in various parts, but are not so numerous or dangerous as those of tropical climates. The largest wild animals are the bear, wolf, boar, and deer.

3. **Mineral.**—Europe is rich in coal, iron, copper, lead, salt, marble and building stone, and many other minerals. The

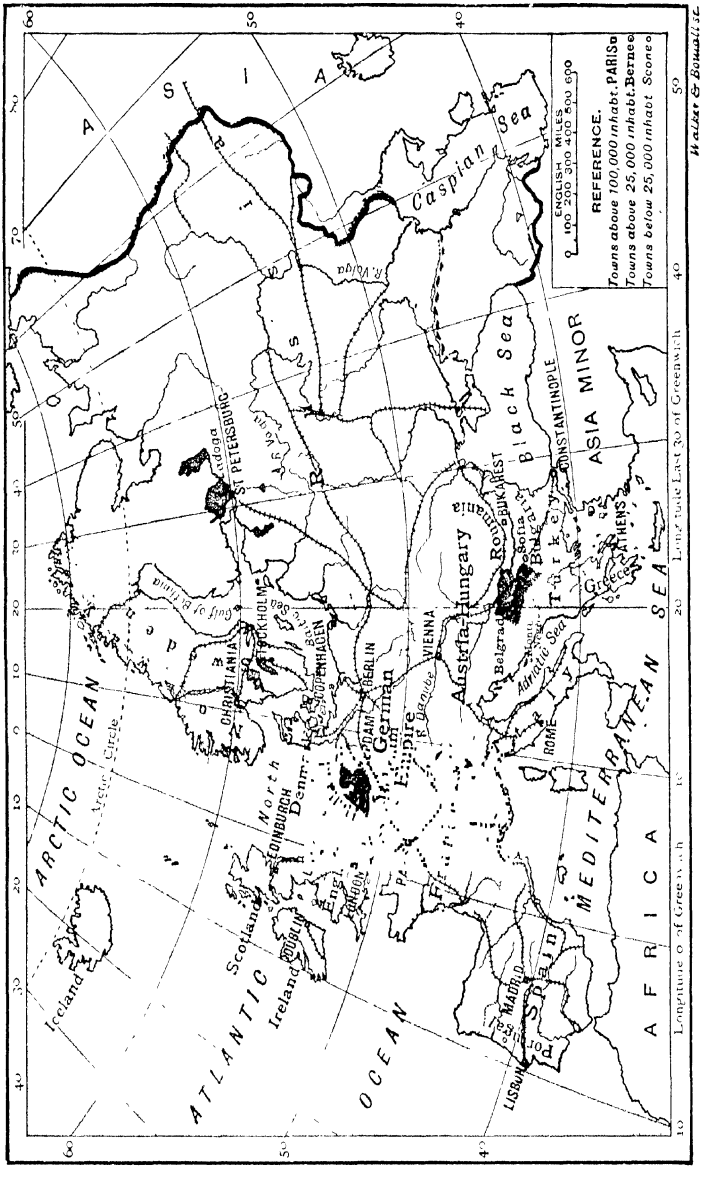


FIG. 81.—POLITICAL MAP OF EUROPE.

Longmans & Co London & New York.

countries richest in mineral wealth are the British Isles, Germany, and Austria.

PEOPLE.—The chief races of people are the **Teutons** in the British Isles, Germany, Scandinavia, Denmark, Holland, and parts of Austria; **Celts** in France, parts of the British Isles, and Spain; **Slavs** in Russia, and the States lying north and south of the lower course of the Danube. All these races are branches of the great Aryan family.

The most numerous **non-Aryan** people are the **Magyars** in Hungary and the **Turks**. The total population is about 400 millions.

The population is much denser in the more genial climate and in the great industrial centres of the west than in the extremer climate of Russia.

THE COUNTRIES OF EUROPE WITH THEIR CAPITALS

England	London	Sweden	Stockholm
Scotland	Edinburgh	Norway	Christiania
Ireland	Dublin	Denmark	Copenhagen
France	Paris	Spain	Madrid
Holland	The Hague	Portugal	Lisbon
Belgium	Brussels	Italy	Rome
Germany	Berlin	European Turkey	Constantinople
Switzerland	Berne	Greece	Athens
Austria-Hungary	Vienna	Servia	Belgrade
Russia	St. Petersburg	Bulgaria	Sophia
Roumania	Bukarest	Montenegro	Cetinje

EXAMINATION PAPERS

A. 1. Name the great natural divisions of the surface of Europe, and describe the Great Plain.

2. Name the chief rivers of Europe, arranging them in groups according to the watersheds.

3. State the varieties of vegetation that would be met with in traversing Europe from the Mediterranean Sea to the Arctic Ocean.

4. Describe a coasting voyage from the mouth of the Oder to the Don, stating exactly the seas, parts of the sea, and straits passed through on the way.

B. 1. Describe the climate of Europe, and state any reasons for peculiarities.

2. Compare the Mediterranean and Baltic Seas.

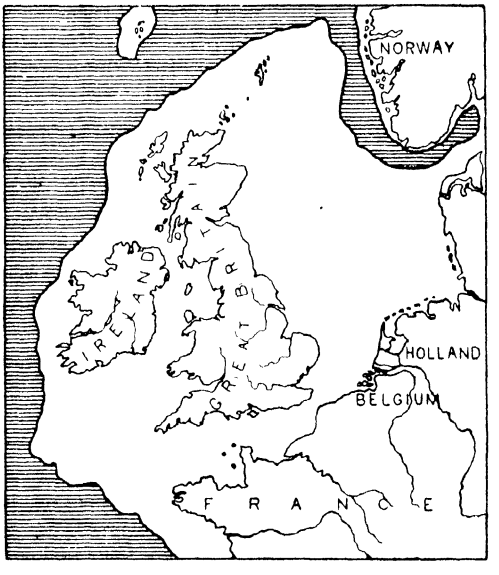
3. Name and indicate the position of the chief mountain ranges connected with the Alpine system.

4. State any reasons why the people of Europe take a foremost place in the commerce of the world.

THE BRITISH ISLES

GENERAL DESCRIPTION.—The British Isles form a large group of islands, extending along the west coast of Europe. They are separated from the mainland and from each other by shallow seas. Were the sea-bed to be raised 600 ft., the submerged banks from which the islands rise would become dry land, and would form a great westerly extension of Europe, as in fig. 88.

FIG. 88.—EFFECT OF SEA-BED BEING RAISED 600 FEET.



The people inhabiting these islands have by their discoveries and conquests built up the largest empire the world has ever seen, the British Empire occupying an area of more than 11 million sq. miles—that is, as large as the whole continent of Africa—and containing a population of nearly 400 millions, or more than one-fourth of the whole human race. They are the greatest maritime and commercial nation in the world, British vessels not only carrying goods for their own trade, but for other nations also.

CAUSES OF THE GREATNESS OF THE BRITISH EMPIRE.—Various reasons have contributed towards the de-

velopment and formation of this vast empire, among the chief of which are:—

1. **CLIMATE.**—The islands lie entirely within the Temperate Zone, and are thus suited for the home of an energetic and enterprising race. The summer heat is not so great that open-air work in the middle of the day is impossible, nor is the cold severe enough to prevent outdoor labour in winter. If we compare the **temperature** of the British Isles with that of other countries in the same latitude the difference is very striking. In Labrador the coasts are icebound for the greater part of the year, and it is with difficulty that human life can be sustained; while in Britain corn and fruits grow well and ripen, and the harbours are free from ice throughout the year. Again, in Eastern Russia the difference in temperature between summer and winter is 60°, the rivers are frozen over, and outdoor labour is suspended for several months.

This mildness and evenness of the British climate is largely due to the prevalence of south-westerly winds, and the warm waters of the Gulf Stream.

2. **RELIEF OF THE LAND.**—On looking at the map it will be noticed that in Great Britain the lowlands are chiefly on the east, and that the land gradually rises towards the west. The rivers of England flowing into the North Sea are, therefore, slow, navigable, and well suited for commerce. By far the greater portion of England and Ireland is under 500 ft. in elevation.

3. **FERTILITY OF THE SOIL.**—The lowland districts are, on the whole, covered with a good depth of fertile soil, while a great deal of the hilly ground affords good pasturage for sheep

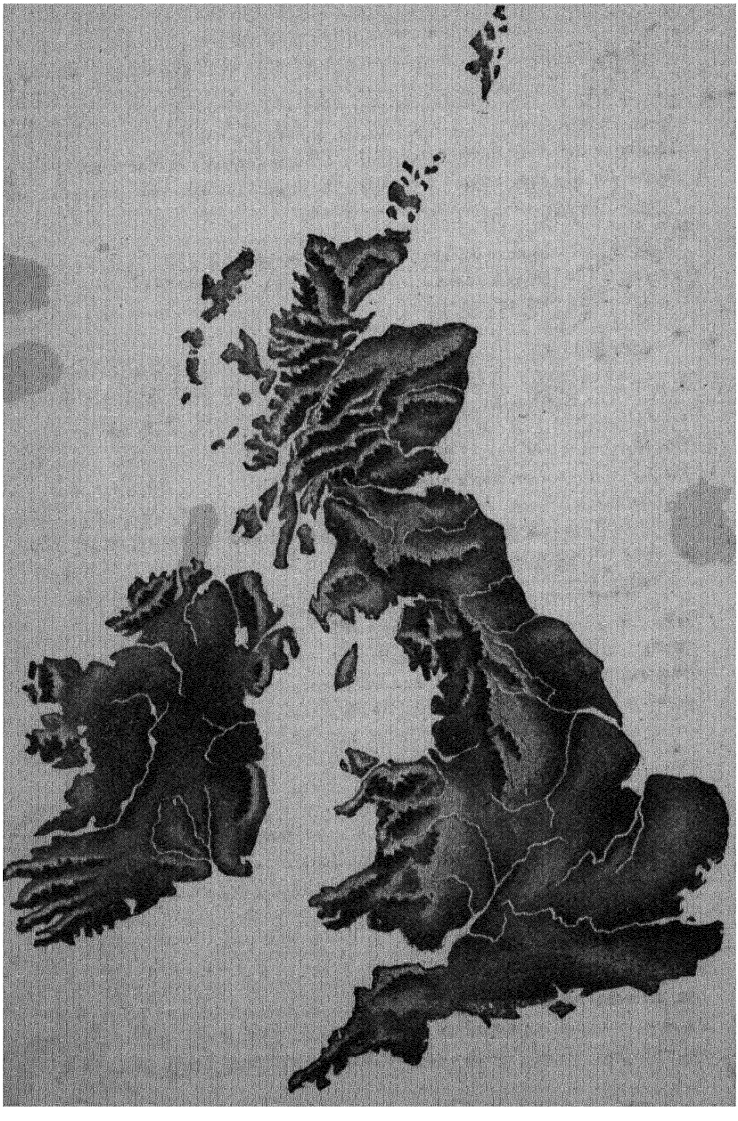
4. **GEOLOGICAL FORMATION.**—In the British Isles nearly all kinds of rocks crop up to the surface, and, as different rocks contain different minerals, Great Britain is especially rich in mineral products. **Coal, iron, lead, tin, zinc, copper, stone,** and **salt** are all found in abundance, and, as in many cases beds of coal, iron, and limestone are found lying near each other, these districts are particularly suited for industrial occupations.

5. **THE EXTENT AND INDENTED CHARACTER OF THE COAST-LINE.**—The coast-line of Great Britain and Ireland exceeds 6,000 miles. This great length of coast is broken up by numerous inlets, so that no part of the country is far from the sea. These commercial facilities are still further increased by the number of excellent harbours and the high tides of the coast, by which vessels can be carried to ports far inland.

6. **SITUATION.**—The British Isles are situated near the centre of the land hemisphere, so that they are within reach of all the great markets of the world both for imports and exports. The sea trade between the principal commercial nations of Europe and the rest of the world must pass by our shores; hence many products are sent to London and other British ports to be again reshipped to other countries.

The insular position of the British Isles, in addition to facilitating

FIG. 89.—RELIEF MAP OF BRITISH ISLES.



commerce, also tends to prevent invasion, and thus does away with the necessity for maintaining a large standing army, and allows industrial pursuits to be carried on with comparative safety. A people living so near the sea became of necessity a maritime race.

SIZE.—The total area of the British Isles is about **121,000 sq. miles,** a little larger than Eastern Bengal and Assam, or about one-fifteenth the size of the Indian Empire. The greatest **length,** from the Scilly Isles to the Shetlands, exceeds 700 miles, while the **breadth** from the east of Great Britain to the west of Ireland is about 500 miles.

Of the two largest islands, **Great Britain** has a length of 587 miles and an area of 88,000 sq. miles, while **Ireland** is about 300 miles long, and contains nearly 32,600 sq. miles.

SEAS.—The British Isles are washed on the west by the Atlantic Ocean, which accounts for the broken nature of the coasts on that side. On the east is the **North Sea,** and to the south of England is the **English Channel,** connected with the North Sea by the **Strait of Dover.**

Between Great Britain and Ireland is the **Irish Sea,** connected with the Atlantic Ocean by the **North Channel** northwards and **St. George's Channel** southwards.

ISLANDS.—A large group called the **Hebrides,** off the west coast of Scotland, and the **Orkney and Shetland** groups to the north. Detached islands are the **Isle of Man,** in the Irish Sea; **Anglesey,** off the coast of Wales; and the **Isle of Wight,** off the south coast of England.

OPENINGS.—These are mostly the estuaries of the rivers. On the east coast of Great Britain are **Moray Firth,** and the **mouths of the Forth, Tay, Humber, and Thames.** On the west are the **Firth of Clyde** and the **Bristol Channel.** The chief openings in Ireland are on the west, **Galway** and **Donegal Bays,** and the **Mouth of the Shannon.**

SURFACE.—The island of Great Britain is mountainous in the north and west—the south-east is a plain. North of the Caledonian Canal, which divides Scotland into two parts, are the '**Highlands of Scotland**'; south of the canal are the **Grampians.** Between Scotland and England are the **Cheviot Hills,** from which the **Pennine Chain** runs southward. The **Cumbrian Group,** with

its beautiful lakes, is to the west of this chain, and the **Cambrian System** overruns Wales.

Ireland consists of a large central plain, surrounded by hills which are highest in the north—**Donegal Mountains**; east—**Wicklow Mountains**; and south—**Kerry Mountains.** The highest mountain in the British Islands—**Ben Nevis** in the Grampians—is only 4,400 ft. high.

RIVERS.—As the highest land lies generally in the west, nearly all the rivers flow to the east. The principal exceptions are the **Severn** in Wales, the **Mersey** in England, the **Clyde** in Scotland, and the **Shannon** (the longest river in the British Isles—224 miles) in Ireland.

In size the rivers of Great Britain are comparatively small and insignificant, but commercially they are of very great importance. Many of them are navigable at their mouths for the largest ocean-going steamers, and consequently almost every river has its port. Commencing on the north of Great Britain, the chief rivers and river-ports in Scotland are the **Dee** with Aberdeen; the **Tay** with Dundee; the **Forth** with Leith, the port of Edinburgh.

In England the rivers are longer and the ports more important. The chief are the **Tyne** with Newcastle and Tynemouth, great coal-ports; the **Tees** with Middlesbrough; the **Humber,** the estuary of the **Ouse** and **Trent,** with Hull; and the **Thames** (215 miles) with London and Tilbury.

On the west of Great Britain are the **Clyde** with Glasgow; the **Mersey** with Liverpool and Birkenhead; and the **Severn** (220 miles) with Bristol and Cardiff.

The **Shannon,** not commercially important, is the longest river in the British Isles, and the only Irish river worthy of note.

LAKES.—The lakes of the British Isles are renowned for their beauty, those of England and Scotland especially, being visited by thousands of tourists every year.

The English **'Lake District'** is in Cumberland, the lakes lying among the hills of the Cumbrian Group. The occurrence of lakes here is due to the irregularity of the mountains, and the heaviness of the rainfall. The largest lake is **Windermere** (10 miles long).

The lakes of Scotland occupy the valleys of the Northern

Highlands and the Grampians. The largest—**Loch Lomond**, 24 miles long and 7 miles in greatest width—is also the largest lake in the British Islands.

The lakes of Ireland are situated chiefly in the northern half of the island. **Lough Neagh**, in the north-east, is the largest. Many of the Irish and Scotch lakes are expansions of the river channels.

CLIMATE.—The British Islands (1) lie **in the Temperate Zone**, between the parallels of 50° and 60° N.; (2) are **surrounded by the ocean**; (3) are **washed by the warm Gulf Stream**; (4) are visited by **westerly** and **south-westerly winds**; (5) have **higher land in the west** than in the east; and (6) are **near the Continent of Europe**. The character of the climate can be deduced from these facts.

Probably no other country in the same latitude has so moderate a climate, and (2), (3), and (4) above account for this. The proximity of the ocean renders the climate equable; the influence of the Gulf Stream is to raise the temperature, and the moisture brought by the prevailing winds from the Atlantic assists in producing both these effects, as well as to bring plentiful rain. The climate of the British Isles may therefore be described as **temperate and moist.**

RAINFALL.—The west winds are condensed on the high land to the west of the islands, and hence the Atlantic coasts are much wetter than the eastern. Moreover, the dry and cold east wind which occasionally blows from the Continent tends to keep the east drier than the west.

FERTILITY OF THE SOIL.—Only a very small proportion of the land of the British Isles is unfit for cultivation (mountains, moors, rivers, and lakes). The soil is naturally fertile, and has been improved by artificial manuring and good farming. The yield of wheat per acre is greater in England than in any other European country.

PRODUCTS.—The British Isles are situated in the cold temperate zone of deciduous hard-wooded trees, and the **oak, beech, elm, ash, willow,** &c. are common. The chief cultivated crops are **cereals (wheat, barley,** and **oats); root crops (potatoes, turnips,** &c.); and **fruits.**

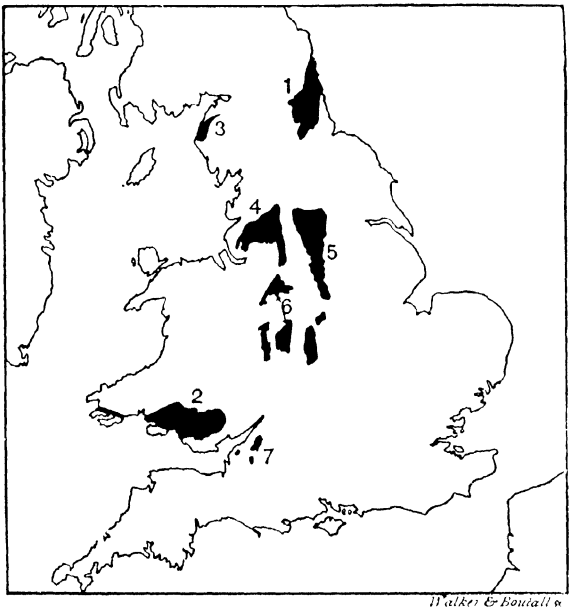
A considerable portion of the cultivated area is under **grass.**

PEOPLE.—The inhabitants of the British Isles are descended mainly from two races—the **Celtic** and the **Teutonic.** The Celts were the aborigines, and were driven by successive invaders into the hills of Scotland and Wales, and to some extent to Ireland. The Teutons came mainly in three invasions: (1) the **Saxons,**

Angles, and Jutes; (2) the **Danes**; and (3) the **Normans**, who became the rulers in 1066. These various invasions account for the composite nature of the English language.

The **total population** of the British Isles in 1901 was **41,605,000**, or about **340 to the square mile**, as compared with an average density of 167 to the square mile for the whole of India. England and Wales are much more densely peopled than Scotland and Ireland.

FIG. 90.—MAP OF ENGLAND SHOWING COALFIELDS.



More than three-quarters of the people **live in towns**, as compared with only ten per cent. in India.

The people profess the Christian religion.

OCCUPATIONS.—1. **Agriculture** employs a much smaller number of people than formerly. The cheapness of imported grains has made corn-growing unprofitable, and cattle-rearing and dairy-farming have taken its place very largely, even in the agricultural parts of the country. A line joining the Humber on the east coast, with Portland Bill on the south, divides England

into two parts—the eastern portion being agricultural. The north of Scotland, which is not covered with mountains, and the greater portion of Ireland are pastoral. The chief grains are **wheat, barley,** and **oats**; green crops are **hay, turnips, hops,** and **potatoes** (the last specially in Ireland). Orchards are found all over the country; the chief fruits are **apples, pears, plums,** &c.

2. **Fishing.**—The cool shallow seas of the north Temperate Zone are the natural spawning beds for many varieties of fish. The British Islands are therefore famous for their fisheries, and there is not a coast on which fishing villages are not found. The **herring** fishery of the North Sea is world-renowned. **Grimsby** and **Yarmouth** are the chief centres. **Salmon** and **trout** are found in many of the rivers.

3. **Mining.**—The minerals of Great Britain are very important, but Ireland is deficient. The most useful minerals, coal and iron, are found in close proximity, and the abundance of limestone makes the working of iron cheap and profitable.

The principal coalfields are in

England—(1) **Northumberland and Durham.**
(2) **South Wales.**
(3) **Cumberland.**
(4) **South Lancashire.**
(5) **South-West Yorkshire.**
(6) **Staffordshire.**
Scotland— **Ayrshire.**
The Clyde Basin.
The Forth Basin.

Iron is worked on or near several of these fields. The chief districts are in **South Yorkshire, the Furness district of Lancashire, Staffordshire, South Wales,** and in the neighbourhood of **Glasgow on the Clyde. Copper and tin** are found in the **south-west of Great Britain,** but foreign copper ore is now largely smelted on the South Wales coalfield at Swansea. **Lead** is mined in **Cumberland,** and **salt** in **Cheshire; good building stone** is found in various parts, **granite** in **Aberdeen,** and **slate** in **Wales. Peat** is dug from the bogs and used as fuel in **Ireland.**

MANUFACTURES.—The use of steam machinery has made it very advantageous to build large factories on the coalfields; hence all the great manufacturing industries are chiefly carried on there. The principal manufactures are:—I. **Cotton goods.** II. **Iron goods.** III. **Woollen goods.** Of lesser importance, **silk**

FIG. 91.—POLITICAL MAP OF BRITISH ISLES.

Longmans, Green & Co, London, New York Bombay & Calcutta

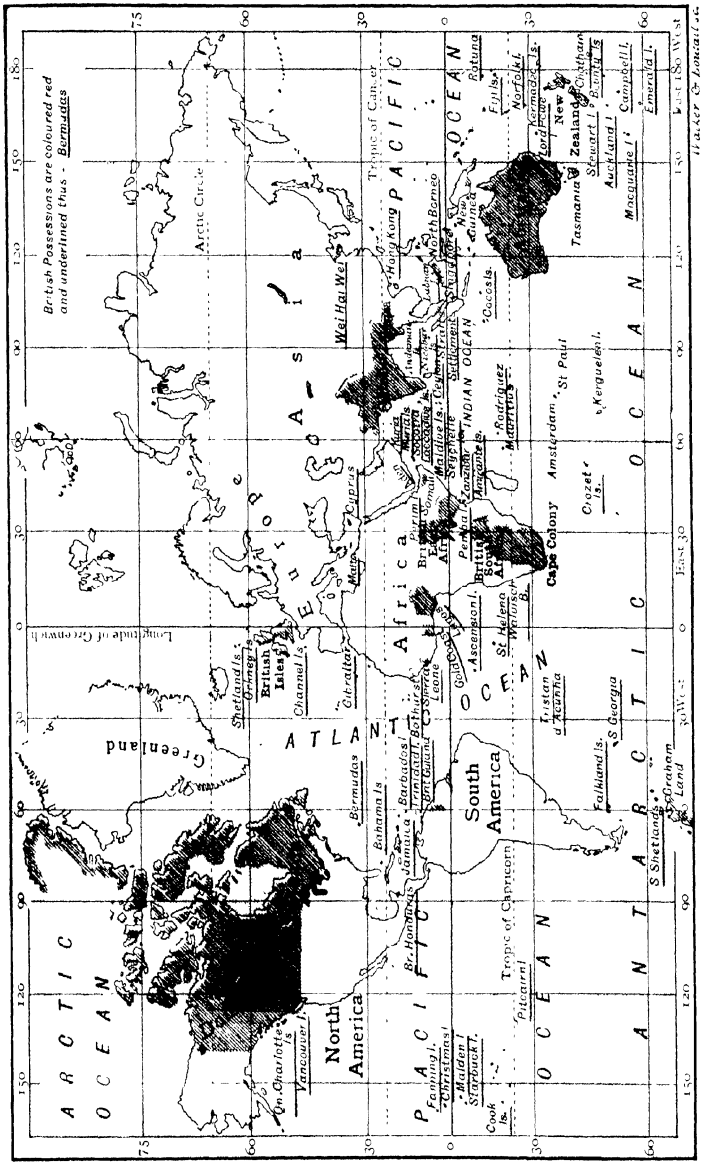


FIG. 92.—THE BRITISH EMPIRE.

Longmans & Co London & New York

goods, linen, earthenware, glass, chemicals, leather, paper, and **smelting** and **working of copper** and other **metals.**

I. **The Cotton Manufacture.**—This is carried on almost entirely upon the **Lancashire coalfield.** The reasons for this are—(1) The abundance of coal; (2) the moist climate, which is so suitable for spinning; (3) nearness of the port of Liverpool. The raw cotton is obtained from the United States, India, and Egypt.

FIG. 93.—THE COTTON TOWNS.

Walker & Boutall sc.

The principal towns engaged are: — **Manchester** and **Salford, Oldham, Bolton, Rochdale, Blackburn, Preston,** in Lancashire; and **Stockport** in Cheshire.

Manchester and Salford (764) form the greatest manufacturing town in the world; within a radius of twelve miles there is a population of nearly two millions. By means of the ship canal from the Mersey, goods can be brought to the city without unloading at Liverpool.

Liverpool, with **Birkenhead** on the opposite side of the Mersey (joint population 800), is the great cotton port—second in tonnage in Great Britain, and third in the world. It has seven miles of docks alongside the river.

Glasgow, on the Clyde coalfield, and **Nottingham** have also important cotton industries.

II. **THE IRON MANUFACTURE.—Iron-smelting** is carried on at (1) **Glasgow on the Clyde field;** (2) **Middlesbrough on the Durham field;** (3) **Merthyr Tydvil on the South Wales field;** and (4) **Barrow near the Lancashire field.**

Iron and steel goods are made in the South Staffordshire field (the Black Country), at **Birmingham, Wolverhampton,** and **Walsall; cutlery** is produced at **Sheffield,** originally, no doubt, on account of the presence of good grinding stone; **arms** at **Birmingham, Newcastle,** and **Woolwich** (the Government arsenal); **cycles** at **Coventry.**

Shipbuilding is carried on at the mouths of the **Clyde** (**Glasgow**); **Tyne** (**Newcastle**); **Wear** (**Sunderland**); **Humber** (**Hull**); **Thames** (**London**); **Mersey** (**Liverpool**); and also at **Belfast in Ireland.**

III. **THE WOOLLEN MANUFACTURE.**—The chief centre of this industry is on the Yorkshire coalfield. The raw material comes mostly from Australia and South Africa by way of Liverpool and Hull. The chief towns engaged are **Leeds** (428), **Bradford** (280), and **Huddersfield.**

Woollen cloth is also made on the Ayrshire coalfield at **Kilmarnock**; fine cloths in the **West of England**, and blankets at **Rochdale.**

IV. **MINOR INDUSTRIES.**—**Linen** is made at **Dundee** on the Forth coalfield, the flax coming mainly from Russia; and at **Belfast**—the coal for the factories coming from the Ayrshire field. The **Dundee jute** trade has declined as the Indian trade has risen.

Earthenware is made in **Staffordshire**, some of the clay coming from the south coast; it is found cheaper to convey the clay to the coal than the coal to the clay. The chief town of the 'Potteries' is **Stoke-on-Trent.**

Silk goods are made at **Derby**, **Coventry**, and **Bradford.**

Glass and chemicals are made at **St. Helens** in Lancashire, near the Cheshire salt district; **leather and boots** at **Leeds** and **Northampton.**

COMMERCE.—The manufactures and commerce of Great Britain exceed those of any other country of the world. The tonnage of her ports is nearly double that of the combined shipping of the United States, Germany, Norway, France, and Italy, the five maritime countries next in importance.

The **imports** may be divided into two classes:—

(1) **Raw material for manufacture**; (2) **Food-stuffs.**

(1) The chief **raw materials** and the countries from which they come are:—

Cotton—United States, India, Egypt.
Wool—Australia, South Africa, India.
Silk—China, France.
Flax and hemp—Russia and India.
Jute—India.
Timber—Canada, North Europe, Burma.

(2) **Food-stuffs.**

Grain—North America, Russia, India.
Meat—America and Australia.
Tea and coffee from India; the latter from Brazil also.
Butter, eggs, wine, and **fruits** from various parts of the continent of Europe.

British **exports** consist of manufactured goods and minerals. The chief, in order of importance, are:—**Cotton goods, iron and steel, woollen goods, coal and fuel, machinery, chemicals,**

clothing, linen goods, jute goods, copper, earthenware, and **ships.**

Of these the **British Possessions** take over **one-fourth.**

SEAPORTS.—The chief seaports, according to the **amount** of trade, are the following :—

London (4½ millions; including suburbs, 6 millions) is the largest city and seaport in the world. The density of population of the County of Middlesex, which contains the greater part of London, is 11,000 to the square mile. Nearly one-third of the exports and over one-third of the imports are dealt with here. Near the mouth of the Thames is Tilbury, the outport, with an increasing trade.

Liverpool and **Birkenhead** form one great port, which has risen on account of the development of the manufactures in Lancashire and Yorkshire and the increase of trade with America.

Cardiff exports the produce of the South Wales coalfield Other ports on the Bristol Channel are **Newport** and **Swansea.**

The Tyne Ports.—**Newcastle** (214), **North** and **South Shields**, and **Sunderland**, all export coal, and carry on a great trade in iron, machinery, and shipbuilding.

Hull (240), on the east coast, has a large trade with the Baltic and Mediterranean Seas.

Glasgow (760) exports the produce of the Clyde coalfield, and trades chiefly with America.

Southampton is advancing rapidly as a port It has steamship lines going to Africa and South America, and part of the North American trade is going to Southampton instead of Liverpool in order to enable the companies to compete with the Continental lines.

Dover has a large trade with French, Belgian, and Dutch ports.

Manchester (764) is a rising port since the construction of the ship canal. Its tonnage is nearly half that of Glasgow.

MEANS OF INTERNAL COMMUNICATION.—The British Islands are well supplied with **railways, canals,** and **good roads.** Nine large railway systems radiate from London, and Scotland and Ireland are also well provided with railways. The large rivers are joined by navigable canals, and all the towns are connected by good metalled roads.

The chief canals are the **Manchester Ship Canal,** and the **Caledonian Canal** across the middle of Scotland, which saves the dangerous journey round the north coast.

GOVERNMENT.—The form of government in the United Kingdom is that known as a **Limited Monarchy,** consisting of the Sovereign and Parliament. The full title of the Sovereign is

King of the United Kingdom of Great Britain and Ireland and of the British Dominions beyond the Seas, and Emperor of India.

Parliament is composed of the **House of Lords**, consisting of 589 members, all with the exception of the bishops possessing an hereditary right to sit; and the **House of Commons**, consisting of 670 members, elected by ballot to represent the counties and parliamentary boroughs.

For purposes of local government, the country is divided into **County Council** districts, which, except in thickly peopled areas, coincide with the counties.

TOWNS.—Most of the important towns have been mentioned in connection with their industries or trade. Other towns are the following:—

In England.—There are nine towns in England with a population of over 250,000, and as many as eighty-seven with more than 50,000 inhabitants. In India there are only seventy-nine such towns.

Oxford, Cambridge, Durham, London, Liverpool, Leeds, Sheffield, Manchester, and **Birmingham** are University towns.

Scarborough, Hastings, Brighton, and **Llandudno** are the most important of a large number of seaside watering places.

Cheltenham, Bath, Buxton, and **Harrogate** are well-known inland watering places.

Chatham, Portsmouth, and **Plymouth** are naval stations.

Windsor, on the Thames, is the residence of the King. On the opposite side of the river is **Eton**, which has a famous public school.

In Scotland.—**Glasgow** (760) is the largest and most important city.

Edinburgh (with its port Leith, 393) has been the capital for centuries.

Paisley, near Glasgow, has manufactures of shawls and thread. **Aberdeen** (153) the largest town in the Highlands, is a considerable port, and has granite quarries in the vicinity. The Scotch universities are at **Edinburgh, Glasgow, St. Andrews**, and **Aberdeen.**

In Ireland.—**Dublin** (379) is the capital, the largest city, the centre of a university. It has important breweries and spirit distilleries.

Belfast (348) is the first industrial city in Ireland. It is the centre of the Protestant population, who live mainly in the north.

Limerick is an ancient city on the Shannon estuary. There are two Irish universities, both with headquarters at Dublin.

DOMINIONS OF THE BRITISH EMPIRE.—The vast possessions of Britain are scattered all over the world. The principal parts are :—

British Isles.—121,000 sq. miles, 41,000,000 inhabitants.

European Possessions.—121 sq. miles, 210,000 inhabitants.

Gibraltar, Malta, and Gozo.

Asiatic Possessions.—1,950,000 sq. miles, 300,000,000 inhabitants.

India and Burma (1,800,000 sq. miles, 294,000,000 inhabitants), Ceylon, Cyprus, Straits Settlements, Hong Kong, Aden, British Borneo.

African Possessions.—Over 2,700,000 sq. miles, 42,000,000 inhabitants.

Cape Colony, Natal, Orange River Colony, Transvaal Colony, Rhodesia, Bechuanaland, Gambia, Sierra Leone, Gold Coast, Mauritius, St. Helena, and vast territories in Eastern Africa, and the Niger Basin.

American Possessions.—3,614,000 sq. miles, 7,492,000 inhabitants.

Canada, Newfoundland, British Honduras, British Guiana, British West Indies, Falkland Islands, Bermudas.

Australasian Possessions.—3,174,000 sq. miles, 5,000,000 inhabitants.

Australia, Tasmania, New Zealand, British New Guinea, Fiji.

Total: British Empire, 11,600,000 sq. miles, 395,000,000 people.

EXAMINATION PAPERS

A. 1. Why is it supposed that the British Isles once formed part of the mainland of Europe?

2. How are the two chief islands separated from each other and from the mainland?

3. Draw a map of the British Isles and insert the chief physical features.

4. What causes have contributed to the commercial pre-eminence of Britain?

B. 1. Where are the chief elevations of Great Britain and Ireland, and what is their effect upon the commerce and climate?

2. Show that the British Isles possess a mild and equable climate compared with other countries in the same latitude.

3. What are the chief crops in—(*a*) Great Britain, (*b*) Ireland? How have these changed of late years?

4. Explain how the extent and character of the coast-line have facilitated trade.

C. 1. How does the insular position of the British Isles affect trade?
2. What are—(*a*) the principal mining, (*b*) the principal manufacturing industries?
3. Give the population of the three principal parts of the British Isles. Compare the population with that of other countries.
4. What are the chief races inhabiting the British Isles? In what parts are they chiefly found now?

D. 1. Show the effect of the following upon the climate of the British Isles: The direction of the mountain ranges, the Gulf Stream, the prevailing westerly winds
2. Name, and give the situation of, the five chief coalfields of England.
3. Name the three principal manufacturing industries of the British Isles, and give reasons for their situation.
4. Where in Great Britain are the following found:—Tin, lead, slate, granite, clay, iron-ore?

E. 1. Name, and give facts concerning, the Tyne, Thames, Clyde, and Bristol Channel ports
2. From what countries do the British Isles obtain their food supplies?
3. Whence does Great Britain receive timber, raw cotton, wool, and silk?
4. How do you account for the number of large towns in Great Britain?

F. 1. Where are the following, and for what are they noted:—Bath, Harrogate, Llandudno, Brighton?
2. Mention an interesting fact about each of the following:—Windsor, St. Andrews, Cork, Coventry, Paisley, Grimsby.
3. Give some account of the form of government of the United Kingdom.
4. Give the approximate size and population of the British possessions in Asia, Africa, America, and Australasia.

FRANCE

BOUNDARIES AND SIZE.—The boundaries of France are almost entirely natural boundaries—the sea, the **English Channel,** the **Bay of Biscay,** and the **Mediterranean Sea** lying on three sides, the **Pyrenees** separating the country from Spain, the **Alps** from Italy, and the **Jura** from Switzerland. Only on the borders of Germany and Belgium is the boundary artificial.

The **Strait of Dover** is only 20 miles wide, and London and Paris are within six hours' journey of each other.

The Pyrenees are a range of lofty mountains, most of which lie within the borders of Spain. The passes are high and difficult, and the great roads run round the ends of the range.

The **area** is **206,000 sq. miles,** or rather smaller than Burma.

FIG. 94.—FRANCE: PHYSICAL AND POLITICAL.

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COAST-LINE.—Three coasts present themselves to the sea, the north, west, and south. Of these the north coast is the most broken, **Cape Ushant**, **Cape de la Hague**, and **Cape Gris Nez** (Grē Nā) projecting into the English Channel.

On the whole the coasts are rocky, except in the south-west, where the shores of the **Landes** are low and sandy.

RELIEF.—The surface of France slopes from the south-east towards the north and west.

1. The highest mountains lie on the borders. Of these the chief are the **Alps**, with **Mont Blanc** 15,700 ft. (nearly three miles) high, and the **Pyrenees**.

2. The chief system of highlands in the interior is the **Central Plateau**, the average height of which is about 3,000 ft.

3. The eastern edge of the Central Plateau consists of a long range of heights rising steeply from the valley of the Rhone and called the **Cevennes**.

4. The **Auvergne Mountains** cross the Central Plateau from north to south.

Many of the mountains upon the Central Plateau are the craters of extinct volcanoes. Such are called **Puys**. The Central Plateau is mostly wild and rugged. Few plants will grow except in the sheltered valleys, and hence this region is very thinly peopled.

LOWLANDS.—Stretching away to the north and west of the Central Plateau are fertile plains, or gently rolling country crossed by rivers that are navigable for many hundreds of miles. The greater part of France consists of lands lying below an elevation of 1,000 ft.

RIVERS.—France is one of the best-watered countries of Europe. It possesses many **navigable rivers**, of which the **Seine**, **Loire**, **Garonne**, and **Rhone** are the main streams. As the highlands lie in the south-east and the general slope of the lowlands is towards the north and west, it follows that most of the rivers must flow in these directions. Further, the greater part of their courses must be across the lowlands where their currents are slow, and hence they are of great service to navigation.

1. The **Seine** (430 miles) rises in the Plateau of Langres, and, after a winding course, and after receiving the waters of many tributaries, flows into the English Channel. It opens into a wide estuary just before reaching

the sea, and so affords a safe harbour for ships. It drains an agricultural and manufacturing district, and has many towns upon its banks, the chief being **Paris**, the capital of France; **Rouen**, a large manufacturing centre; and **Havre**, an important seaport.

2. The **Loire** (570 miles) rises in the Cevennes, and discharges its waters into the Bay of Biscay. It is navigable for 500 miles, drains a wide stretch of fertile lowlands, and has many towns of historic interest upon its banks, such as **Orleans** and **Tours**.

3. The **Rhone** (490 miles) rises in the Alps in Switzerland, flows through Lake Geneva, and, after entering France, makes a sharp bend to the south, continuing in this direction until it enters the Mediterranean. Its course is so rapid that it brings down large quantities of mud and earth, which have been deposited at its mouth, thus forming a delta.

4. The **Garonne** and **Dordogne** drain the south-western part of France, and, uniting, form the estuary known as the **Gironde**.

CLIMATE AND RAINFALL.—France lies farther south than England, and is therefore warmer in the summer. It also has more sunshine. The west of the country stretches so far into the Atlantic that it is cooled in summer and warmed in winter by the winds from the ocean. These winds also bring abundance of moisture; hence the west has a much damper climate than the east. On the whole, there is a **sufficient rainfall** for the growth of a great variety of crops.

FERTILITY OF SOIL. Less than one-fifth of France is occupied by mountains, about one-fourth by **plateaux**. This leaves more than **one-half** for the lowlands, and they contain a large proportion of fertile soil. This, combined with an ample rainfall, an abundance of rivers and streams, and plenty of sunshine, places France in the front rank of agricultural countries.

PRODUCTS.—Agricultural.—1. The **vine** is the most valuable of all French crops, and France is the **chief wine-producing country** in the world.

2. **Grain Crops.**—Of these the **wheat crop** of France is next in amount to that of the United States, and is about four times that of the United Kingdom. Other grain crops are **barley, oats,** and **maize.**

3. France also grows green crops, such as **potatoes** and **turnips.**

4. There are also crops of **sugar-beet** and **tobacco**, and large districts are devoted to **mulberry-trees,** the leaves of which furnish food for the silkworms.

Mineral.—The mineral wealth of France is small, the most serious deficiency being in that most needed, viz. **coal.**

There are two chief coalfields, and many smaller ones scattered over different parts of the country.

1. The **Northern Coalfield** in the extreme north-east. Iron is also found in the same neighbourhood, and many manufacturing towns have sprung up, the chief being **Lille.**

2. The **Southern Coalfield** upon the eastern border of the Central Plateau. Here also are several manufacturing towns, the chief of which are **Lyons** and **St. Etienne.**

Coal is imported in considerable quantities from England and Belgium.

MANUFACTURES.—The manufactures, arranged in the order of their values, are :—1. **Woollen goods**; 2. **Silks**; 3. **Cotton goods**; 4. **Linens**; 5. **Machinery.**

1. The **woollen industry** is carried on chiefly in the north, in which district large numbers of sheep are kept, where supplies of foreign wool are easily obtained, and where is plenty of coal and iron. The town of **Lille** is engaged in the woollen as well as in many other manufactures.

2. **Silks.**—The **silk manufactures** are still carried on mostly in the valley of the Rhone, where they first grew up in consequence of the introduction of the silkworm. The chief towns are **Lyons,** the second town in France in size, and **St. Etienne,** both of which are near the southern coalfield and have excellent water for dyeing.

3. The **cotton industry** is carried on chiefly in the towns of Normandy. **Rouen** is the centre of the industry. It receives its supplies of cotton from America through the port of **Havre,** which is to Rouen on a small scale what Liverpool is to Manchester.

4. **Linen** is made mostly at **Lille,** the largest manufacturing town in the north. That part of Belgium which lies near to Lille grows the best flax in Europe, and supplies of coal and iron are to be had from the neighbouring coalfield.

5. **Machinery** is made in many large towns, but **Creuzot** upon the southern coalfield is looked upon as the headquarters of the industry.

TRADE.—France has considerable **internal** as well as **foreign** trade, but her **exports** are not much more in value than half those of the United Kingdom, while her imports are less than half. Much of the French trade is done in English ships.

Means of Internal Communication.—The rivers play an important part in internal trade, all the great rivers being navigable, some of them for many hundreds of miles. Further, all the great rivers are united by a splendid system of canals, and goods shipped at **Havre** on the North

Sea can be carried by water right across the country to **Marseilles** on the Mediterranean, or to **Southern Germany** by the Rhone and Rhine Canal.

FOREIGN TRADE. -**Imports.**—Four articles, viz. **wool, coal** and **coke, raw silk, raw cotton,** together make up about one-third of the imports.

Many other kinds of goods are imported in large quantities, such as **timber** and **wood, hides** and **furs, wine,** &c.

Exports.—Four articles also make up about one-third of the value of the exports, viz. **woollen** and **silk manufactures, wine, raw wool,** and **yarn.**

There are also many other kinds of goods that are exported, such as **leather-ware, cheese** and **butter, manufactured cotton goods,** &c.

It will be seen by the above that France both exports and imports large quantities of wine. The importation of wine has only sprung up in recent years, and is due to the ravages of an insect pest that has destroyed an immense number of vines.

SEAPORTS.—The chief ports arranged in the order of their importance are:

1. **Marseilles** (491) is the chief seaport of France. It trades chiefly with the countries of the Mediterranean, and also with India, China, and Australia.

2. **Havre** (129), at the mouth of the Seine, is the chief seat of the trade with America.

3. **Bordeaux** (257), upon the R. Gironde, has a large export trade in wine.

TOWNS AND DISTRICTS.—**1. The Northern Plains.**—This is a wide stretch of fertile lowlands drained by the R. Seine and other rivers. It contains a coalfield, upon which many manufactures are carried on, and is the most thickly peopled part of the country.

PARIS (2,714) is the capital of France. It stands upon the R. Seine, and is situated in about the centre of the Northern Plains. It is the very heart of French life, and so favourable is its position for the site of a great city that it ranks next to London as the second city in the world. Its situation is so exposed that it is surrounded by a wall and ditch and a ring of strong forts. It contains many fine buildings, of which the most famous are the **Cathedral** and the **Louvre**, the latter containing the finest collection of pictures and statues in the world. Paris is associated with a large number of industries.

Havre is the chief seaport in the north of France, and has considerable trade with America and England.

Rouen is the old capital of Normandy, and stands a little higher up the Seine. It is the chief seat of the French **cotton** manufacture.

Calais, Boulogne, and **Dieppe** have a coasting trade, mostly with England, and are of interest as starting-points for people travelling between France and England.

2. **Lowlands of the Loire Basin with Normandy and Brittany.**—This is almost a purely agricultural district, drained by the R. Loire and other streams. The coast of Brittany abounds in fish, and the fishermen are the hardiest seamen in France.

Lorient and **Brest** are two naval ports upon natural harbours.

Cherbourg, on the coast of Normandy, has, at great expense, been made into a strong naval port.

Nantes is a seaport at the mouth of the Loire.

Orleans and **Tours** are very old towns upon the Loire.

3. **South-western France.**—This comprises the greater part of the basin of the Garonne. South of the R. Gironde is the flattest part of France. It is also the least populous and most unhealthy. The best wine is made in the valley of the Garonne.

Bordeaux is the chief town. It has a large export trade in wine.

4. **Valley of the Saône and Rhone.**—This is one of the most thickly populated parts of France. It contains a coalfield and is the seat of **silk** and other manufactures.

Marseilles (491) is an important port; its trade has greatly increased since the opening of the Suez Canal. Among its local industries are the **refining of oil** and the making of **soap,** due to the presence of the olive.

Lyons (453) is the third town in France in point of size, and is the centre of the world's silk-industry.

St. Etienne supplies Lyons with coal, and manufactures ribbons and other silk goods.

Toulon is a naval station with an almost impregnable fortress.

RAILWAYS.—All the great railways radiate in every direction from Paris, which they connect with all the other large towns and seaports.

POPULATION.—About 38 millions, or 185 to the square mile.

The People.—In very early days France was peopled by the Celts, but the Celtic tongue is now heard only in a part of Brittany, whereas the Latin language, altered by degrees into the **Modern French,** has spread over almost the entire country. It is the most polished and expressive of all languages.

Government.—The Government is **Republican**, at the head of which is the **President of the French Republic.** The Legislature consists of two chambers, viz. the **Senate** and the **Chamber of Deputies.** Members of the latter are chosen by the people, and every man has a vote.

Foreign Possessions.—In **Africa**, France holds **Algeria**, and also has a protectorate over Tunis; she also owns **Senegal**, the **French Soudan, Dahomey**, as well as a district of the Congo basin.

Madagascar, the third largest island in the world, is now a French colony, and **Réunion.**

(In **Asia** she owns **Pondicherry** in India; **Cochin-China** and **French Tongking, Annam**, and **Cambodia.**)

Corsica, a large island in the Mediterranean, belongs to France. It is very mountainous. Its capital is **Ajaccio**, the birthplace of Napoleon Buonaparte.

In **America**: French Guiana; Martinique, Guadeloupe, and other islands in the West Indies.

In **Oceania** she possesses New Caledonia, Tahiti, and other islands.

EXAMINATION PAPERS

A. 1. Where are the Pyrenees, Mont Blanc, Jura Mts., the Cevennes, and the Puys?

2. Point out the chief capes, giving their names and positions. Describe the coast from the Pyrenees to the Strait of Dover.

3. Name the four chief rivers. How do you account for the fact that three of them flow towards the Atlantic?

4. What are the chief crops? Name some crops that are grown in France but not in England.

B. 1. Explain why France is less a manufacturing country than England.

2. Why is the north-eastern corner of France so thickly peopled? What towns are to be found there?

3. What are the chief manufactures, and where are they carried on?

4. What kinds of goods are made at Lille, Lyons, St. Etienne, Creuzot, and Rouen?

C. 1. Name the chief exports and imports.

2. What are the chief seaports, and where are they situated?

3. Describe the valley of the Rhone and Saône: what are the chief occupations of the people, and which are the chief towns?

4. Draw an outline map of France, inserting rivers and chief towns.

BELGIUM AND HOLLAND

GENERAL DESCRIPTION.—**Holland,** or **The Netherlands,** as it is properly called, is the northern portion, and **Belgium** is the southern portion, of the remarkable country which lies between North-eastern France and Western Germany. As the name 'Netherlands,' or 'Low Countries,' implies, the surface is low, particularly in Holland, where a very large district is actually below the level of the sea, which is kept back by great embankments, called **dykes.** The surface gradually rises towards the east and south-east, and hence only a small part of Belgium is very low. In the extreme south-east of Belgium the surface rises to a height of 1,000 ft. The people inhabiting these countries have for many centuries been famous for their industry and skill in manufactures and commerce, the Dutch having long been daring sailors, and at one time masters of the sea. Before 1830 there was no such kingdom as Belgium, but that country formed part of The Netherlands.

The English term **Holland** will be used in this chapter, although the correct name of that country is **The Netherlands,** and the former name only that of two coast provinces.

BOUNDARIES.—**North** and **West** by the **North Sea. East** by **Germany. South-west** by **France.**

There are no natural boundaries on the land side, and the Belgian frontier is defended by strong fortresses Belgium has always been famous for its strongly fortified cities Holland depends largely for its defence on the power to flood the surface, and hence that country has but few fortresses.

SIZE.—**Belgium,** over 11,300 sq. miles in area. **Holland,** over 13,600 sq. miles in area.

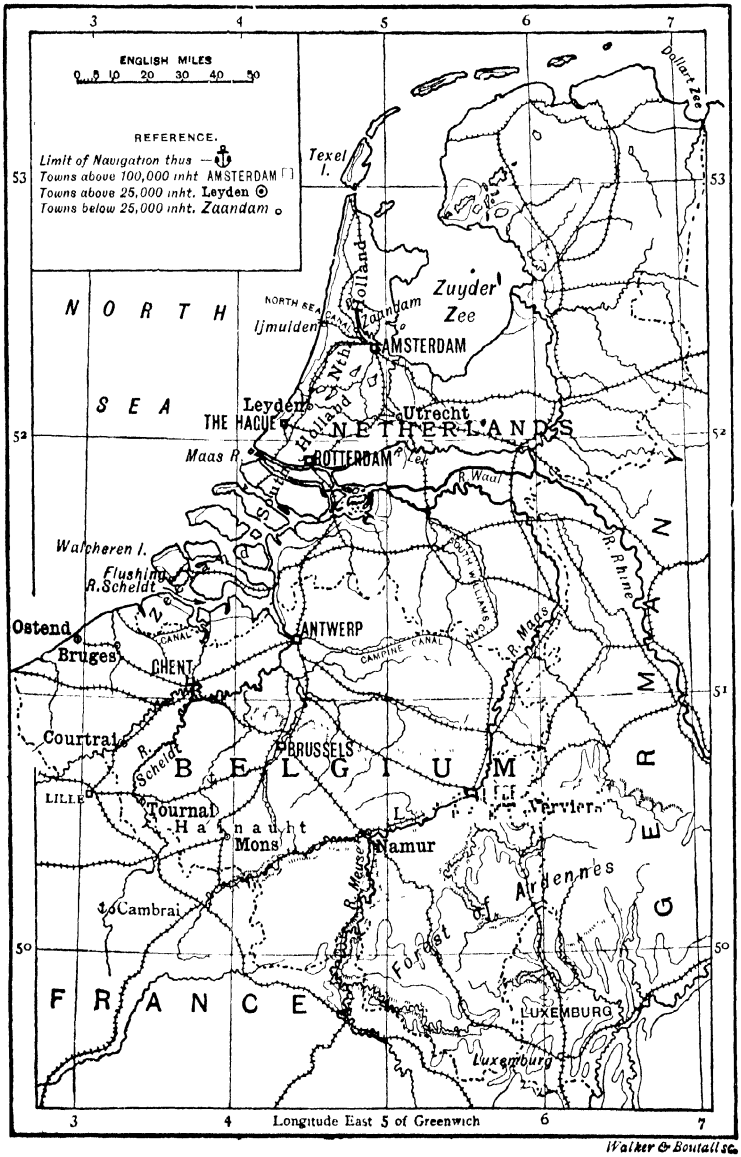
Together, the two countries are a little smaller than Mysore.

COAST-LINE.—This is skirted throughout its entire length on the islands and the mainland by sand hills or **dunes,** which act as a natural barrier to the sea.

SEAS, &c.—**Dollart** and **Zuyder Zees,** both formed by inroads of the ocean in the twelfth and thirteenth centuries. There are many channels between the islands in the deltas of the **Rhine** and **Scheldt.**

RELIEF.—The western part of Holland consists of a large

FIG. 95.—BELGIUM AND HOLLAND: PHYSICAL AND POLITICAL.



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tract of country and a number of islands almost entirely below sea level. Other tracts of low land lie on the shores of the **Zuyder** and **Dollart Zees.** To the east and south the land very gradually rises, but there is no elevation in Holland to be distinguished as a hill. In Belgium the surface rises towards the south and east, and in the region called the Forest of **Ardennes** forms part of the plateau which extends across Central and Southern Germany.

Lowlands.—The lowest land forms the provinces of North and South Holland and Zeeland, and nearly all the surface of Belgium and Holland forms a part of the **Great European Plain.**

RIVERS.—Holland possesses the mouths of three large rivers: The Rhine, the Maas, and the Scheldt.

The middle course of the Maas, or Meuse, and the main part of that of the Scheldt, are in Belgium.

1. The **Rhine** divides soon after entering Holland, and embraces a very large portion of that country between its numerous branches. The chief town on the Rhine in Holland is **Rotterdam.**

2. The **Maas** (550 m.), or **Meuse,** rises in France, flows through Belgium, and joins the Waal. The main stream by which both the Rhine and Maas enter the sea is called the **Maas.** Numerous busy manufacturing and famous historical cities are on the banks of this river. The chief are **Namur** and **Liège.**

3. The **Scheldt** (250 m.) is almost entirely in Belgium, of which it drains nearly half. The channels by which it reaches the sea are all in Holland. Upon this stream are the two great cities, **Antwerp** and **Ghent.**

CLIMATE AND RAINFALL.—The winters are cold, the summers are hot, and the rainfall is sufficient for agriculture.

FERTILITY OF SOIL.—Much of the soil is naturally fertile, and other portions have been made productive by the industry of the people. Therefore a very small portion is uncultivated or waste land, especially in Belgium, where the farms are generally very small, and every possible foot of ground is made to bear crops.

PRODUCTS.—1. **Agricultural.**—The climate of Holland is *damper*, the winters more *severe*, and the soil *moister* than in Belgium. Hence the crops are not precisely the same.

In **Belgium.**—**Wheat, wine, sugar-beet,** and **tobacco,** together with crops similar to those grown in Holland.

In **Holland.**—**Flax, potatoes, hemp,** and **rapeseed,** with **rye, wheat,** and **oats,** are the chief crops.

The most important farm products are **butter, cheese,** and **cattle** from the extensive pastures.

2. **Mineral.**—Belgium is as remarkable for the abundance of its mineral wealth as Holland is for its deficiency.

Belgium.—Coal, iron, and **zinc** are the most abundant. The two chief **coalfields** are in the provinces of Hainault and Liège. Iron ore abounds and is found near the coal. Hence Belgium is largely engaged in iron production and manufacture.

Holland.—Peat is a valuable product.

MANUFACTURES.—**Holland** is chiefly engaged in **farming** and **trading**; but its manufactures are by no means unimportant, in spite of the lack of coal, for wind is extensively used in working machinery. **Textile Fabrics.**—Cotton, linen, and woollen are made and **Shipbuilding** is carried on.

Many mills are also engaged in the preparation of colonial and tropical produce for the markets.

Belgium is an exceedingly important manufacturing country. The chief manufactures are 1. **Linen**; 2. **Woollen**; 3. **Iron**; 4. **Cotton.**

Linen is chiefly made near the flax-growing western districts at **Tournai. Woollen** cloth at **Verviers, Carpets** at Brussels and Tournai **Iron** chiefly at Liège, and **Cotton** at Ghent.

TRADE.—The **Dutch** carry on a great trade with their East Indian colonies, and much of their commerce is the re-export of colonial produce. The trade of **Belgium** is more strictly confined to the exchange of manufactured and other products for raw materials, &c., but an increasing amount of goods is carried through Belgium to and from continental countries, especially since the construction of the Alpine tunnels.

MEANS OF INTERNAL COMMUNICATION.—These are excellent by river, canal, road, and railroad.

In Holland the total length of canals is enormous, and a very great amount of traffic passes along them.

FOREIGN TRADE.—Imports of Holland.—**Wheat** and **flour, manufactured iron, textile fabrics,** and, in addition, **colonial produce,** as spices, coffee, rice, &c.

Exports.—Home produce, as **butter, cheese, cattle, linseed, fish, spirits,** &c.

Foreign Produce.—Coffee, rice, tobacco, spices, &c.

Imports of Belgium.—Wheat and **flour, raw materials** for manufactures, as cotton, flax, hemp, wool; **chemicals, minerals, timber.**

Exports.—Yarns of various sorts, wheat and **flour, machinery, cloth, iron, sugar.**

SEAPORTS.—In Holland the chief are **Rotterdam, Amsterdam,** and **Flushing.**

In Belgium, **Antwerp, Ghent,** and **Ostend.**

Rotterdam (370).—The trade of Rotterdam is half as large again as the united imports and exports of Amsterdam and Flushing. By means of deep canals the largest vessels pass into the heart of the city. Much difficulty has been experienced in keeping open a deep-water channel in the river mouths, and the shipping of Rotterdam mostly passes along a ship canal.

Amsterdam (550).—This city is built upon numerous islands and canals.

Flushing is the Dutch port nearest to the British Isles, and has an amount of traffic nearly equal to that of Amsterdam.

Antwerp (290) has a splendid commercial position on the Scheldt. Through it pass great quantities of merchandise between the other continental countries and all parts of the world.

Ghent (160) is reached by an important canal from the Scheldt estuary, and has considerable coasting and inland traffic.

Ostend is the Belgian port nearest to England, and is a busy packet station.

TOWNS.—In HOLLAND.—Amsterdam (520) is the largest city, and, though not the chief seaport, it is the commercial capital of Holland. The merchants of Amsterdam carry on a most extensive and varied commerce, and many industries are pursued in and about the city, of which the chief is diamond-cutting.

Rotterdam (*see* Seaports).

The Hague (230) is the seat of government.

Utrecht (110) is a busy commercial and manufacturing city.

Leyden possesses a great university.

In BELGIUM.—Brussels (600) is the capital and the largest city. It is a well-built modern city with important manufactures.

Antwerp, Ghent, and **Bruges** are famous old towns, all having been great in commerce and manufactures in the Middle Ages.

Liège (173) is the centre of the iron industry.

POPULATION.—Of Holland, 5,500,000, or 436 to a square mile.

Of Belgium, 7,000,000, or about 590 to a square mile.

The United Provinces of India have 433 to a square mile. Cochin has 596 to a square mile, the densest population in India.

THE PEOPLE.—The people of Holland are called Dutch, and are of Teutonic race, with a Low German language. The Belgians consist of two distinct races: one of Celtic origin speaking French, and the other a Teutonic race, related to the English, who speak the Flemish language, which is nearly allied to English.

GOVERNMENT.—Each country is a **Limited Monarchy**, with a Parliament of two Houses. In Holland this Parliament is called the States-General.

In Belgium the House of Representatives and the Senate compose the Parliament.

FOREIGN POSSESSIONS.—Holland possesses vast territories in Asia, America, and Australasia.

In **Asia**, Java, part of Sumatra, Borneo, and Celebes, with many of the neighbouring islands.

In **America**, Dutch Guiana or Surinam, and some small West Indian islands.

In **Australasia**, a large portion of New Guinea.

The total extent of Dutch foreign possessions is about sixty times the size of Holland.

Luxemburg, to the south-east of Belgium, is in two parts, one ruled by a grand-duke and the other forming a province of Belgium. The Grand Duchy is about 1,000 sq. miles in extent, and has about 250,000 inhabitants, whose chief occupations are agriculture and mining, together with some manufactures. The chief town is **Luxemburg**.

EXAMINATION PAPERS

A. 1. State the extent and boundaries of Holland and Belgium.
2. Describe the surface of Holland.
3. Give an account of the river system of Holland and Belgium.
4. Compare the climate of Holland with that of Belgium.

B. 1. What natural disadvantages have been overcome by the Dutch in commerce and manufactures, and how?
2. Name the minerals and the crops of Belgium.
3. Give lists of the imports and exports of Holland, and indicate any peculiarity.
4. Name the chief seaports of Holland and Belgium, and enumerate the most important articles of commerce.

GERMANY

GENERAL DESCRIPTION.—The name **Germany** now denotes a great union of States of various sizes occupying the northern part of Central Europe between Russia in the east, and France, Belgium, and Holland in the west. These States range in size from **Prussia**, which has an area of 134,000 sq. miles, to **Bremen**, which is only 99 sq. miles in area. Germany is favoured with a temperate climate, fertile soil, and abundant mineral wealth; and is consequently peopled by a numerous and busy nation. The highlands of Germany are all in the southern portion, and the general slope of the country is towards the north. Hence the rivers, with one exception, take a northerly course, and, as they flow across a wide plain, are long and generally slow. From their contact with, or proximity to, many populous countries, the German people carry on an extensive commerce.

BOUNDARIES.—**North.**—**North Sea, Baltic Sea,** and an artificial boundary towards Denmark.

West.—Between Holland, Belgium, and France the boundary is artificial, except that the **Vosges Mountains** separate Germany from France in the south-west.

The Rhine formerly formed a boundary, but from **Bâle**, where it leaves Switzerland, to its entrance into Holland, it is now wholly within Germany.

East.—Between Germany and Russia the boundary is partly formed by rivers—*e.g.* tributaries of the **Oder** and **Vistula**—and is partly artificial.

South.—The R. **Rhine, L. Constance**, the **Alps**, and the mountains which lie round the Bohemian Plateau, and extend from the Danube to the Oder.

SIZE.—Nearly 209,000 sq. miles, or rather smaller than Burma.

COAST-LINE.—The coast bordering upon the North Sea is simply a continuation of that of Holland, and is very similar to it, being low and bordered by sand-dunes and sandy islands. This causes the sea to be shallow, and the river mouths to be impeded, thus hindering navigation. The Baltic is a shallow sea, but its German shores are generally high. In the western

part there are some large irregular islands lying close to the mainland, and in the east are the remarkable lagoon-like openings called **Haffs,** which are separated from the main body of the sea by very narrow spits of land.

SEAS, &c.—The **North Sea**, with the **Dollart Zee** and the mouth of the **Elbe.** The **Baltic** Sea, with the **Stettiner Haff** and the **Gulf of Danzig.**

ISLANDS.—In the North Sea, **Heligoland,** ceded by England to Germany in 1890.

RELIEF.—The slope of Germany is generally from south to north. The country is divided into the **Southern Highland** region and the **Northern Plain.**

The highest mountains are in the South of Bavaria, where the northern ranges of the Alps reach a height of from 8,000 to 10,000 ft. The mountains generally are of moderate height, ranging from about 3,000 to 5,000 ft., and are frequently wooded to their summits.

1. In the south-west the ranges are the **Black Forest** and the **Vosges Mountains,** on the east and west of the Rhine respectively.

2. Between Germany and Bohemia are the **Bohemian Forest, Erzgebirge,** and **Sudetes.**

3. In the centre of Germany are the **Harz Mountains.**

Plateaux.—The highland districts of Germany generally consist of plateaux, upon which the mountain ranges lie. The chief plateau is that of **Bavaria,** which is over 1,000 ft. in average height, and the surface of which is largely marshy.

Lowlands.—The whole of Northern Germany is lowland, and forms part of the **Great European Plain,** which extends from the Ural Mountains to the shores of the Netherlands.

RIVERS.—The chief rivers of Germany are the **Niemen, Vistula,** and **Oder,** flowing into the Baltic; **Elbe, Weser,** and **Rhine,** into the North Sea; **Danube,** flowing eastward from Bavaria.

All the large rivers with northerly courses, except the Weser, rise to the south or east of the German frontier, and, being navigable almost throughout their courses, afford valuable means of communication between Germany and the neighbouring States. The most important river in Germany, the Rhine, reaches the sea through Holland.

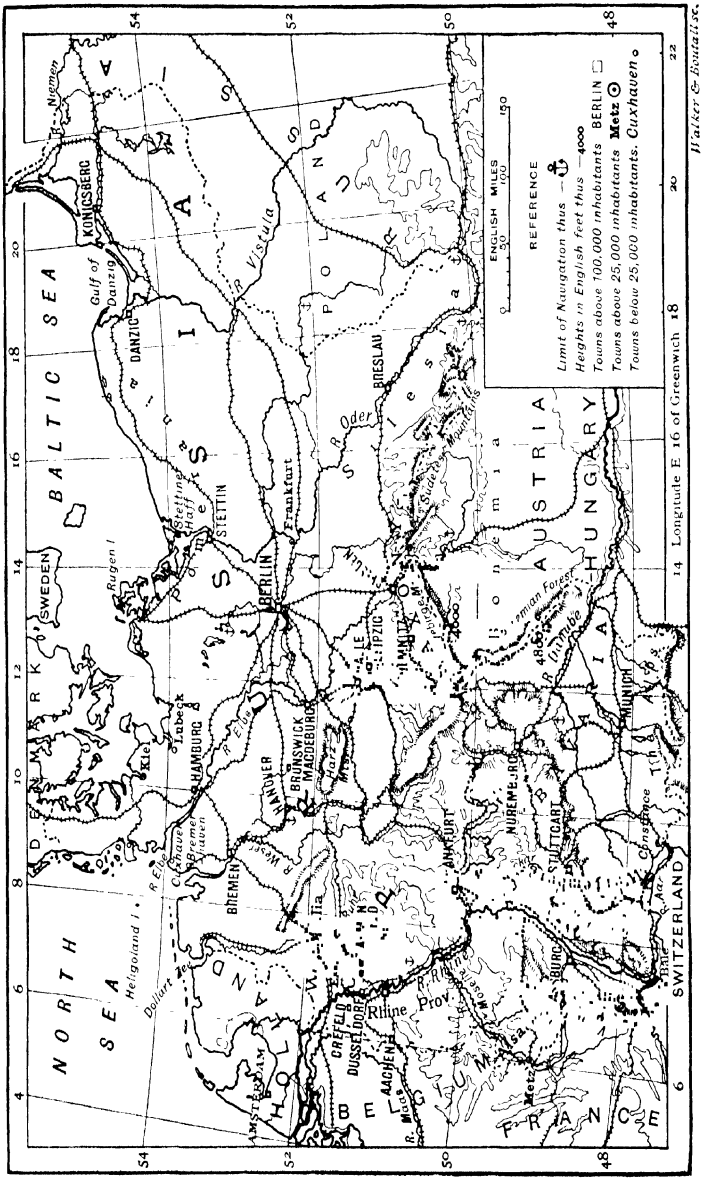

FIG. 96.—GERMANY. PHYSICAL AND POLITICAL.

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The **Niemen** (400 m.) and the **Vistula** (630 m.) have the greater part of their courses in Russia. Great rafts of timber are floated down the Vistula to the port of **Danzig**, which has considerable commerce in summer.

The **Oder** (550 m.) is almost entirely a German river. The chief towns on its banks are **Breslau**, **Frankfort-on-Oder**, and **Stettin**, on the mouth.

The **Elbe** (690 m.) enters Germany through Saxony, and flows north-west to the North Sea. This is a very important river, with many tributaries, of which the **Spree** is the most familiar, having **Berlin** upon its banks. The chief cities on the Elbe are **Dresden**, in Saxony, and **Hamburg**, at the head of the estuary.

The **Weser** (380 m.) is entirely in Germany, and drains an extensive area in the western portion of the country. The most important town is **Bremen**, which is some distance from the sea, and is no longer reached by ships, although controlling an extensive commerce.

The **Rhine** (760 m.), the second longest river in Europe outside of Russia, is formed by the union of a vast number of **Alpine** streams in **Switzerland**, flows through Western **Germany**, and forms a delta which embraces a considerable part of **Holland**.

The Rhine flows partly through a lovely valley where the steep banks are covered with vines, and partly through busy manufacturing districts. The chief tributaries are, on the **left** bank, the **Aar** in Switzerland, draining a great part of that country, and the **Moselle**, which drains the western slopes of the Vosges. On the right, the **Neckar**, **Main**, and **Ruhr**. Some important manufacturing towns in the river basin are **Dusseldorf**, **Barmen**, and **Elberfeld**. Some historic towns are **Cologne** and **Strassburg**. Two important commercial towns are **Frankfurt-on-the-Main** and **Rotterdam** (in Holland).

CLIMATE AND RAINFALL.—The climate of Germany, speaking generally, is colder in winter, and warmer in summer, than that of England.

This is due to the fact that the climate of Germany is less influenced by the ocean than the British Isles. Again, there is but little difference between the amounts of heat in the northern and southern parts of Germany. This is caused by the high land being in the south and the low land in the north. The winter cold is due to the lack of any mountain barrier in the north to check the cold northern winds.

The **Rainfall** is generally sufficient, and is sometimes excessive, causing serious floodings of the rivers.

FERTILITY OF SOIL.—The greater part of Germany is fertile, especially in the river valleys. A very small proportion is waste, barren soil, and this is situated in the Bavarian Plateau and along the Baltic coasts. The mountain slopes are extensively covered with forests, from which a large revenue is derived.

PRODUCTS.—Agricultural.—1. Cereals.—In order of production these are **rye, oats, wheat,** and **barley.**

2. **Beetroot** for sugar, and **potatoes.**

3. **The vine, hay, hops,** and **tobacco.**

The **vine** is largely grown in the pleasant river valleys of the south, and consequently many districts in the Rhineland are noted for wine.

Animal.—Germany has many wild animals; bears and wolves still exist in the forests.

Mineral.—The minerals of Germany are varied, abundant, and widespread.

The chief are **coal** and **iron, potassic salts,** and **zinc.** Others are rock salt, copper, and lead.

Coal.—The chief coalfields are those of the **Ruhr Basin** and of **Saxony,** and each of these districts is the seat of many manufacturing industries.

Iron.—The chief iron-producing states are **Westphalia, Rhenish Prussia,** and **Silesia.**

The **Harz Mountains** are celebrated for mineral ores, chiefly silver and copper.

MANUFACTURES.—The manufactures of Germany are very important and occupy a large proportion of the inhabitants in many districts. The busiest manufacturing centres are near the coalfields of **Saxony, Rhenish-Prussia, Alsace-Lorraine, Silesia,** and **Wurtemburg.** The most important manufactures are—1. **Iron and steel**; 2. **Woollen**; 3. **Cotton.**

1. **Iron** and **steel** are manufactured chiefly in the **Ruhr Basin,** at the town of **Essen,** and in **Saxony.**

2. **Woollen** goods at **Barmen, Elberfeld,** and **Breslau.**

The wool from which the finest goods are produced is obtained from South America.

3. **Cotton** goods at **Chemnitz,** and at a number of towns in **Alsace-Lorraine.**

COMMERCE.—Since the union of all the German States into an empire in 1870, German commerce has grown very rapidly, and has extended to all parts of the world, entering into very keen competition with that of England.

MEANS OF INTERNAL COMMUNICATION.—As in France, the rivers are very largely used in the transport of merchandise, and they are joined by important canals which connect the **Rhine** with the **Rhone** and **Danube,**

and the **Elbe** with the **Oder** and **Vistula**. Thus goods may be carried by canal and river from the North Sea to the Mediterranean and Black Seas.

FOREIGN TRADE.—**Imports.**—**Grain** and **flour**, **raw wool**, **raw cotton**, **cotton** and **woollen yarns**, **coffee**, **raw hides**, and **silk** are the most important.

Exports.—**Sugar**, **coal** and **coke**, **woollen fabrics**, **mixed fabrics of silk and cotton**, and **leather goods** are the most valuable.

SEAPORTS.—**Hamburg**, **Bremen**, and **Stettin** are the three most important; but the amount of commerce carried on at **Hamburg** is more than twice the total of **Bremen** and **Stettin**, which are nearly equal.

Other ports nearly equal to each other in importance are **Danzig**, **Kiel**, **Lübeck**, and **Königsberg**. The **North Sea ports** have a great advantage over those of the **Baltic** in being open in winter while the latter are frozen.

The German ports are mostly at a considerable distance from the sea, and have not a sufficient depth of water for the large vessels of these days. Hence it has been necessary to create new ports nearer to the sea, which are looked upon as outports. Thus, **Hamburg** has **Cuxhaven**, **Bremen** has **Bremerhaven**; **Stettin** and **Lübeck** also have their outports.

Hamburg (800) is the most important commercial city in Germany, and is the fifth seaport of the world. Its situation at the mouth of the **Elbe** puts Hamburg into connection with the river and canal systems of Northern Germany, and hence great quantities of goods are transhipped at Hamburg and distributed through the country.

Bremen (163) has been for many centuries a place of great trade, and is now a remarkable example of a seaport which can only be reached by small vessels. The extensive trade belonging to Bremen is mostly carried on at **Bremerhaven**, which is near the sea, and has water deep enough for large vessels.

Stettin (210), at the mouth of the **Oder**, is conveniently situated for exporting the manufactured goods of Silesia and Berlin.

Danzig and **Königsberg** have a large summer traffic in timber and other forest products, and in grain.

POLITICAL DIVISIONS.—The German Empire consists of twenty-five States, which were formerly independent of each other; and the Imperial Territory, Alsace-Lorraine, wrested from France in the war of 1870–71. There are four kingdoms—viz. **Prussia**, **Bavaria**, **Saxony**, and **Wurtemberg**, of which Prussia has an area of more than one-half the total extent of

the empire. The other States are **Duchies, Grand Duchies, Principalities,** and **Free Cities,** the last-named being **Hamburg, Lübeck,** and **Bremen.**

INLAND TOWNS.—**Berlin** (nearly 2 millions) is situated on the **Spree,** a tributary of the **Elbe,** in the middle of the Great Plain. It is a city of very great importance, both as the capital of the Empire and as a manufacturing city. Like London and Paris and other capitals, the industries are numerous, the chief being machinery-making.

Munich (500), on the **Bavarian Plateau,** is the largest city in **Southern Germany.** This city is situated at the meeting of various railroads from other parts of the Empire, and of those which communicate with **Italy** by way of the **Brenner Pass,** and with **Austria.**

Breslau (422), on the **Oder,** in **Silesia,** has long been an important trading centre; and is also a very busy manufacturing city.

Leipzig (455), in **Saxony,** on a tributary of the Elbe, is a great commercial city, having famous fairs, where are sold vast quantities of books, furs, and woollen goods.

Cologne (372), on the **Rhine,** is chiefly familiar from its connection with the scent which is manufactured there.

Dresden (395) is the capital of **Saxony,** and is famous for its fine buildings, and its picture galleries.

Nuremberg (Nurnberg) is occupied with the manufacture of toys, and is the chief centre for the distribution of the wooden toys and wares made by the peasants of the **Black Forest.**

Metz and **Strassburg** are two strongly fortified places in **Alsace-Lorraine,** which were besieged and taken by the Germans in 1870.

POPULATION.—About 60 millions, or nearly 290 to the square mile, ranging from nearly 4,000 to the square mile in the State of the Free City of Hamburg (158 sq. miles) to 87 in the Grand Duchy of Mecklenburg-Strelitz. Saxony, the most thickly peopled kingdom, having over 700 to a square mile, has the densest population of any kingdom in Europe. This is owing to its numerous mining and manufacturing industries. Germany has 33 towns of over one hundred thousand inhabitants.

THE PEOPLE.—Most of the people of the various German States are of **Teutonic** origin, and are descended from the tribes which proved so formidable to the Roman power in Italy and Gaul.

GOVERNMENT.—The Government of the empire is a **Limited Monarchy** by the Emperor (who is the head of the Prussian Royal Family) and two Houses of Parliament, the Upper House being elected by the States, and the Lower House by the people as a whole.

FOREIGN POSSESSIONS.—Germany has no colonies in the true sense

of the word, but has declared her protection over great areas in **Western** and **Eastern Africa**, and possesses certain islands in the **Pacific**.

EXAMINATION PAPERS

A. 1. State the position of the German mountains, name the chief ranges, and give some idea of their height.
2. Describe the climate of the Great Plain, and account for it.
3. Draw a sketch-map of Germany, and insert the highlands and rivers.
4. What are the chief manufactures in the province of Silesia, in Saxony and Bavaria, and the Rhenish Provinces?

B. 1. Name the German foreign possessions, and describe one of them.
2. Which of the rivers of Germany are commercially of most importance, and why?
3. Write what you can of the iron, sugar, and chemical manufactures of Germany.
4. Name the chief imports and exports of Germany.

C. 1. Name and describe the three greatest seaports of Germany.
2. Describe the relief of Germany, and show how the climate is affected thereby.
3. What are the chief crops of Germany? Indicate in a general way where they are most cultivated.
4. What industries are connected with Essen, Barmen, Breslau, Dresden, and Magdeburg?

DENMARK

GENERAL DESCRIPTION.—Denmark consists of the low indented peninsula of Jutland, a number of islands lying between it and the west coast of Sweden, and of other adjacent islands. The chief of these are **Seeland** and **Fyen** (or Funen). The island of **Bornholm**, some distance to the east in the Baltic Sea, and the **Faroe** Islands, between the Shetlands and Iceland, also form parts of the Danish kingdom. **Iceland**, inhabited by Norse, and a large extent of land in **Greenland**, thinly inhabited, are subject to Denmark.

Jutland and the adjacent Danish islands form part of the Great Plain of Europe. The western coast of Jutland is bordered with sand-dunes and a strip of barren soil, but the eastern portion is fertile. The inhabitants are industrious, intelligent, and enterprising, and the natural resources of the country are well developed.

BOUNDARIES.—Jutland has the **North Sea** on the west;

the **Skager Rack** on the north; the **Kattegat** on the east. **Seeland** is separated from Sweden by the **Sound.**

SIZE.—About 15,300 sq. miles, including the Faroe Islands, which have an area of 514 sq. miles.

Thus Denmark is about the size of Bahawalpur State.

COAST-LINE.—Long fjords with low banks are numerous; the chief of the many **straits** are **The Sound,** between Seeland and Sweden; **Great Belt,** between Seeland and Fyen; **Little Belt,** between Fyen and Jutland; the most important cape is **The Skaw,** the northern point of Jutland.

RELIEF, RIVERS, &c.—The surface is generally flat and the rivers are small and unimportant.

CLIMATE AND RAINFALL.—The winters are long and cold, but the summers are warm enough to ripen wheat. The rainfall is sufficient.

The **soil** is mostly fertile, and the greater part is well cultivated.

PRODUCTS.—1. **Agricultural.**—Oats, barley, rye, and wheat; potatoes and **roots,** including **sugar-beet. Butter** is produced in large quantities, and much is exported.

2. **Minerals** are wanting, and Denmark has largely to import coal and metals.

3. **Animals** of the ordinary domestic kind are reared, and many are exported.

INDUSTRIES.—The chief occupation of the Danes is agriculture, but home industries are carried on by many of the peasants, and there are some manufactures of **woollens** at Copenhagen.

TRADE.—**Imports.**—**Manufactured goods** of many kinds, **sugar, timber, coal,** and **coffee. Exports.**—Almost entirely farm produce—**butter, cattle, barley, wheat,** and **horses.**

TOWNS.—**Copenhagen** (378), or with suburbs (476), the capital, is much the largest city in Denmark, having, with its suburbs, nearly ten times as many inhabitants as **Aarhus,** the next largest town. The city is well situated for commerce, is the first port, and possesses many fine buildings.

Aarhus (52) is the largest town in Jutland and the chief centre of trade in the peninsula.

POPULATION.—Nearly 2½ millions, almost entirely of Teutonic race.

GOVERNMENT.—A limited monarchy, with two Houses of Parliament called the **Rigsdag.**

FOREIGN POSSESSIONS.

THE FAROE ISLANDS, like the Shetlands, are inhabited by a hardy race, who live by fishing, fowling, and sheep-rearing.

ICELAND is a large volcanic island near the Arctic Circle. The chief volcano is **Hekla.** The people are remarkable for their education and intelligence. The capital is **Reikjavik**, a town of about 2,000 inhabitants. The chief exports are fish and sheep.

GREENLAND—The inhabited portion is on the west coast, where live about 10,000 people, whose chief pursuit is fishing.

WEST INDIAN POSSESSIONS.—Three small islands, **St. Croix, St. Thomas,** and **St. John**, producing and exporting **sugar.**

EXAMINATION PAPER

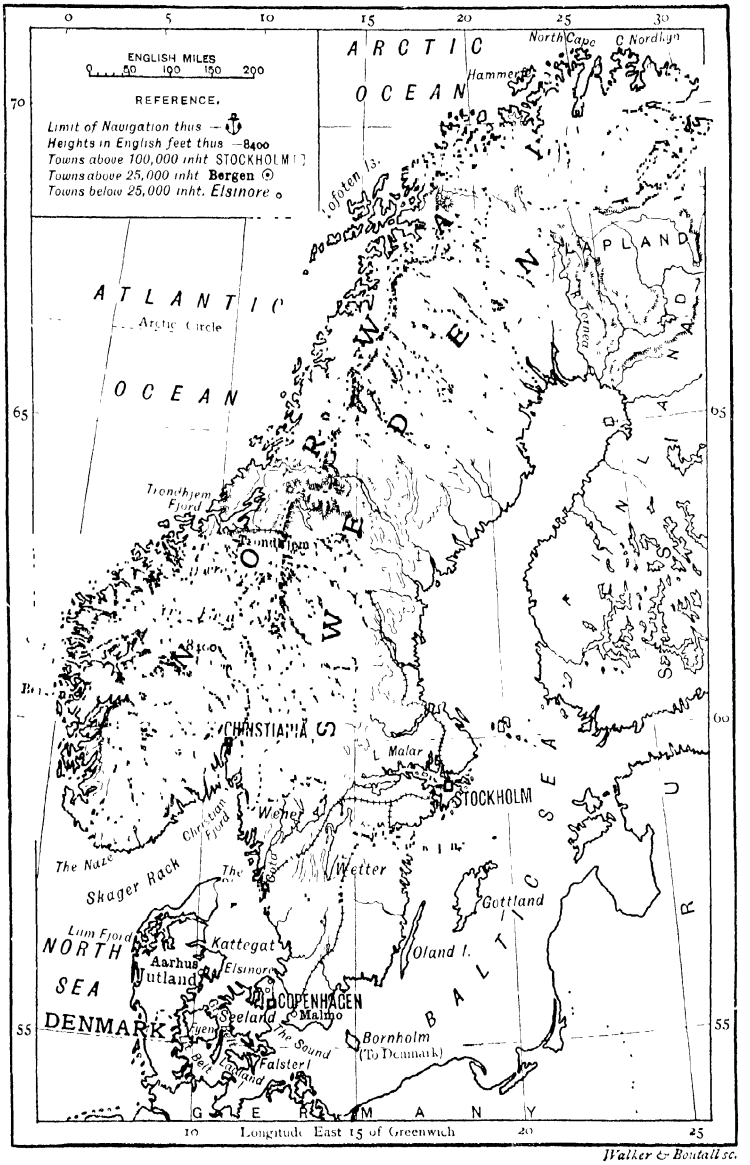
1. Of what does Denmark consist? Give its boundaries and relative size.
2. Draw a map of Denmark, giving names of islands, openings, and straits.
3. What are the chief occupations of the Danes? Name the leading exports and imports.
4. Name the distant possessions of Denmark, with their positions, products, and any facts relating to the inhabitants.

SWEDEN AND NORWAY

GENERAL DESCRIPTION.—Sweden and Norway together form Scandinavia, the largest peninsula in Europe.

Norway, the western portion, has a remarkably rugged coast-line, broken by many deep, long, and narrow openings called **fjords. Sweden**, the eastern and larger portion of the peninsula, slopes down to the Baltic Sea, and has a low coast-line bordered by a vast number of small islands. The surface of the peninsula is very high in the south-west and west, gradually decreases in elevation towards the north, and slopes gently to the east and south. The northerly latitude of the peninsula and its great elevation cause the climate to be cold and much of the surface to be incapable of cultivation. There are, however, considerable differences between the climate and fertility of Norway and Sweden; for the Gulf Stream causes the fjords of Norway to be free from ice during the winter, while the Baltic is frost-bound.

FIG. 97.—SWEDEN AND NORWAY.



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On the other hand, the summers are hot, and crops ripen freely on the extensive plain stretching towards the Baltic.

BOUNDARIES.—**West**, by the Atlantic and Arctic Oceans. **East** and **south**, by the Baltic Sea. The Russian frontier is formed mainly by the rivers **Tornea** and **Tana**.

SIZE.—The united area is nearly 300,000 sq. miles, or one and a quarter times the size of Burma.

COAST-LINE.—The western coast is wonderfully broken by **fjords**, which run inland for many miles, with sides often formed of steep mountains descending directly into the water. Innumerable islands fringe both the western and eastern shores, of which the chief are the **Lofoten** Islands in the west, and **Gottland** and **Oland** in the Baltic.

The chief **capes** are **The Naze**, **North Cape**, and **Nordkyn**.

RELIEF.—The western part of the peninsula is a great **plateau**, upon which are many ridges and scattered mountains. The highest part of the plateau is in Norway, and different portions of the plateau are called **fields**, as **Dovre Field** and **Ynes Field**.

LOWLANDS.—The whole of the wide portion of Sweden is a **plain**, and the Baltic coast is bordered by low land.

In Norway the only low land is a narrow strip round the south coast.

RIVERS.—Numerous torrents leap down the sides of the western fjords, but there is only one large river in Norway—viz. the **Glommen**, which is 400 miles long, and flows from north to south. Numerous rivers of considerable length flow down the long transverse valleys towards the Baltic, generally forming long lakes in their course. The chief Swedish river is the **Gota**, which drains Lakes Wener and Wetter.

LAKES.—The lakes of Sweden form the second largest system in Europe. The largest are **Wener** and **Wetter**. Many others lie on the plain and in the long valleys that descend from the plateau.

CLIMATE AND RAINFALL.—The winter is long and cold, lasting seven months; but the Atlantic on the west is warmer than the Baltic, and hence the fjords are not frozen, while the coast of Sweden is blocked with ice for several months. The rainfall is abundant, especially in Norway. The summers are

hot, considering the latitude, and crops of corn ripen in a very short time.

FERTILITY OF SOIL.—The plateau is generally too high and bleak to be fertile, but Sweden contains much fertile soil. In Norway the hill-slopes are either clothed with forests or cultivated with grass and other crops, but particularly with grass which is made into hay.

PRODUCTS.—1. **Agricultural.**—**Sweden** and **Norway** : **Oats, barley, rye,** and **potatoes** are cultivated, with some little wheat and pulse ; but the quantity produced is insufficient for the needs of the people, though Sweden exports some oats.

2. **Animal.**—Sweden is able to export cattle and sheep, but Norway has to import live animals.

3. **Forest Products.**—**Timber, tar** and **pitch, resin** and **turpentine** are very valuable. The chief trees are the fir and pine.

4. **Fisheries.**—The Norwegian fisheries are especially valuable, and help to make up for the poverty of the soil. The chief are **cod, herring,** and **whale.** The capture, curing, and preparation of these fish and their products give employment to many of the inhabitants.

5. **Minerals** are plentiful in Sweden, but of little importance in Norway.

The chief is **iron,** which is remarkable for its excellent quality.

MANUFACTURES.—These are chiefly the preparation for the market of the **raw products** of the country. The abundance of wood accounts for the large **timber mills** and the manufacture of **matches.** Wood is also pulped to make **paper** and **cardboard. Wooden ships** are built in Norway. The **iron** of Sweden is **smelted,** and excellent **steel** is made. Another important industry in Sweden is the manufacture of **butter.**

Textile manufactures are inconsiderable in Norway, but an increasing quantity of raw cotton is imported into Sweden for manufacture.

TRADE.—Norway and Sweden, but especially Norway, possess large numbers of merchant vessels, and do a great carrying trade.

MEANS OF INTERNAL COMMUNICATION.—Conveyance of passengers and merchandise is much easier in Sweden than in Norway. In Sweden the rivers and lakes are often navigable, and are connected by very

useful canals. There are also 5,000 miles of railway. The chief canal is the **Gota** Canal, which joins the River **Gota** with **Lakes Wener** and **Wetter** and the **Baltic**.

In **Norway** the chief mode of passing from place to place is by the fjords, on whose banks stand nearly all the towns.

Imports.—Both countries import **rye** and other grain, manufactured goods, as **woollens** and **machinery, coal,** and **tropical produce.** In addition, Sweden receives **raw cotton.**

Exports.—Sweden—Timber, iron, live animals, butter, oats, matches. Norway—Timber, cod, herrings, and **train oil.**

It will be noticed that Norway exports the products of its forests and fisheries, while Sweden, in addition to forest products, exports produce of its mines, farms, and factories.

SEAPORTS.—The chief ports in **SWEDEN** are **Gothenburg, Stockholm,** and **Malmo.** In **NORWAY, Christiania** and **Bergen** are the chief, but every town of any importance is a seaport.

TOWNS IN SWEDEN. **Stockholm** (300), the largest city in Scandinavia, stands at the entrance of Lake **Malar**, and, being built upon islands, bears some resemblance to **Venice**. It is the capital of Sweden, and is both a manufacturing city and a seaport.

Gothenburg (or Goteborg) (130) is the chief seaport of Sweden, and has important manufactures.

Malmo is well situated for traffic with Germany.

TOWNS IN NORWAY. **Christiania** (227) is the capital and by far the largest town. It is a well-built city, with many fine and interesting buildings.

Bergen (72) is the chief fishing-port, and has a great export of dried fish and fish products, such as cod-liver and train oil.

Trondhjem, on the fjord of that name, is the ancient capital.

Hammerfest is a small town within the Arctic Circle, visited by tourists to see the 'Midnight Sun.'

POPULATION.—**Sweden,** 5,100,000; **Norway,** 2,240,000.

THE PEOPLE are purely Teutonic, with the exception of less than fifty thousand Finns and Lapps.

GOVERNMENT.—Norway and Sweden were under one king from 1814 until 1905. In that year the union was dissolved, and each country has now an entirely separate government. Each is a limited monarchy, consisting of the sovereign and two Houses of Parliament. (The Parliament of Sweden is called the **Diet,** that of Norway the **Storthing.**)

EXAMINATION PAPERS

A. 1. State the position and boundaries of Scandinavia.
2. Describe the coast-line of Norway and Sweden, naming the islands and openings.
3. Describe the river system of Scandinavia, and name the chief rivers.
4. Give some account of Stockholm, Christiania, Bergen, Gothenburg, Hammerfest, and Malmo.

B. 1. Name the natural products of Norway and Sweden, and point out any that are common to both countries or peculiar to either.
2. Say what you can of the manufacturing industries of Scandinavia.
3. State the population of Sweden and Norway, pointing out where the bulk of the people live in each country. Name the races of people, and indicate any points of their character.
4. Name the imports and exports of Sweden and Norway, and give reasons for any differences.

RUSSIA

GENERAL DESCRIPTION.—Russia is a vast country, which occupies more than one-half of the surface of Europe, and forms the main portion of the Great European Plain, which extends from the Ural Mountains to the north-eastern border of France. The coast-line is in four detached portions, forming the shores of as many seas. One of these, the Caspian Sea is a salt lake, with its surface much below the level of the ocean. The chief natural feature of Russia is its system of great rivers, which mostly rise at a low elevation, and flow long distances across the plains. The rivers, being navigable, to some extent make up for the deficiency of coast-line; but they suffer from being frozen in winter. Much of the soil is fertile, but there are large barren tracts in the extreme north and in the south-east, where very little vegetation can exist, and the population is, consequently, scanty.

BOUNDARIES.—1. On the **north.**—The **Arctic Ocean,** which is frozen for one-half of each year.

2. **On the south.**—The **Black** and **Caspian** Seas, and a tributary of the R. **Kur.**

3. **On the east.**—The **Ural Mountains** for part of the distance.

4. **On the west.**—The **Baltic** Sea and R. **Pruth.**

Artificial boundaries separate Russia from Germany and Austria-Hungary in the west, while Russian territory is continuous in Europe and Asia on the East.

SIZE.—European Russia, over 2,000,000 sq. miles. (Compare with Indian Empire.)

European Russia is less than one-third the size of Asiatic Russia.

COAST-LINE.—The coasts are broken by many openings, more especially in the Arctic Ocean and Baltic Sea; but all are frozen during winter. In the Black Sea the northern coast is icebound for about eleven weeks each year, while in the White Sea the period is thirty-one weeks.

SEAS &c.—The **White Sea** is the chief opening upon the northern coast.

In the Baltic Sea the principal parts are the Gulfs of **Bothnia, Finland,** and **Riga.**

The **Sea of Azof** is connected with the Black Sea by the Strait of **Kertch.**

The Caspian Sea is salt and very deep. The Black Sea is less salt than the Mediterranean, but salter than the Baltic, which is brackish. All these seas are either entirely or nearly tideless.

ISLANDS.—In the **Arctic Ocean.—Nova Zembla** is the largest of several large bleak islands to the north of Russia.

RELIEF.—The surface is very flat, with a slight slope outwards from the Valdai Hills towards the Arctic Ocean, Baltic, Black, and Caspian Seas.

MOUNTAINS.—The highest mountains are the **Caucasus** in the south-east and the **Urals** in the east.

1. The **Caucasus Range** lies between the Black and Caspian Seas, and is remarkable for its steepness and great height. The highest peak is **Elburz** (18,500 ft.). This range has very few passes, and is crossed with difficulty.

2. The **Ural** Mts. form a very long range of only moderate height, the highest point being under 6,000 ft. The range is remarkable for the gentle nature of the slope from east and west throughout most of its length, and is very easily crossed.

3. The **Valdai** Hills form a low **plateau,** and are important as being the source and watershed of many great rivers.

LOWLANDS.—Some remarkable districts in the vast plain of Russia are:—1. The **Tundras**, the bleak, frozen plains bordering on the Arctic Ocean. 2. The **Black Earth Region**, in the southern half of Russia, remarkable for the depth and richness of the soil. 3. The **Steppes** of the south-east. Much of the surface of the steppes is below the sea-level, and abounds with small salt lakes, the soil being saline. This region is generally very barren.

RIVERS.—Russia is watered by many large rivers, which are frozen in winter, and are liable to flooding when the snow melts and to shrinking during the summer heats. The Great Plain is elevated to the south-east of St. Petersburg into the low Valdai Plateau, and a low ridge is continued eastwards towards the Ural Mts. In these elevations most of the rivers take their rise and flow outwards to the four bordering seas—the Arctic Ocean, Baltic, Black, and Caspian Seas. Hence the Russian rivers are easily placed in four groups.

(*a*) **Rivers Flowing into the Arctic Ocean.**—**Petchora** and **Northern Dwina.**

These streams flow through bleak and barren country with scanty population, and are of very little importance.

(*b*) **Rivers Flowing into the Baltic Sea.**—**Neva, Western Dwina, Niemen,** and **Vistula.**

The Neva connects the great lakes with the sea, and has St. Petersburg upon its banks. The mouths of the **Niemen** and **Vistula** are in Germany.

(*c*) **Rivers Flowing into the Black Sea.**—**Pruth, Dniester** (700 m.), and **Dnieper** (1,200 m.).

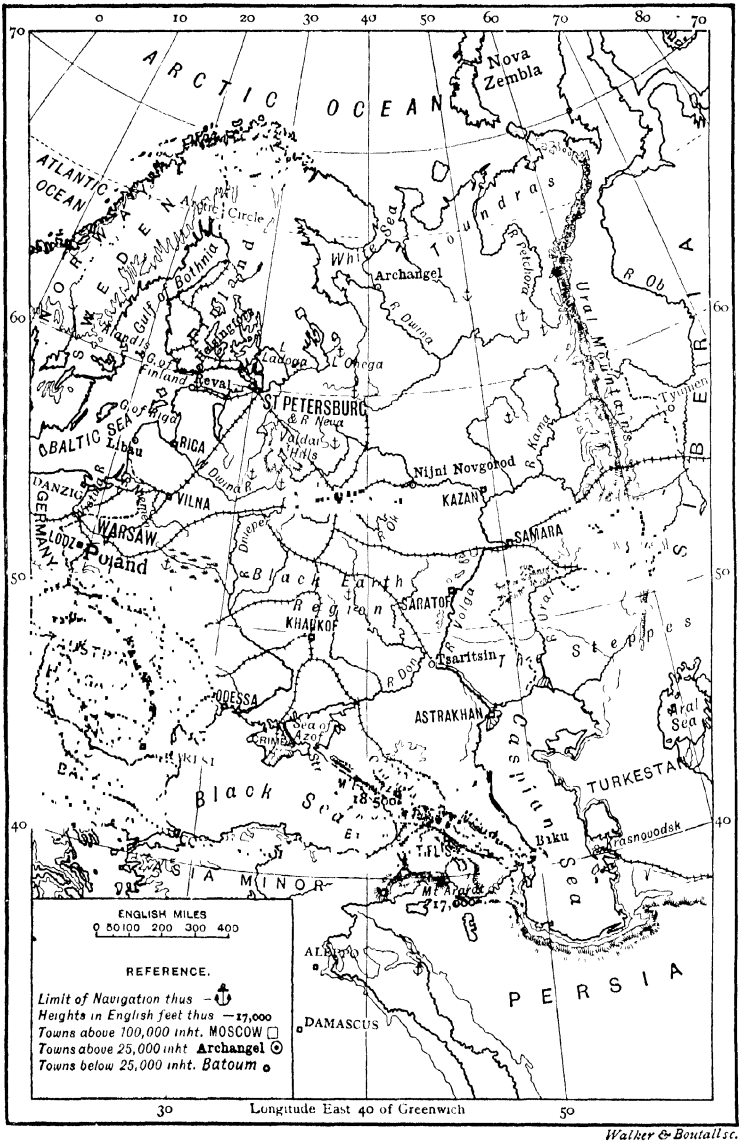
The **Don** (1,100 m.) flows into the Sea of Azof. The navigation of the four last named is hindered by rapids and shallows.

(*d*) **Rivers Flowing into the Caspian Sea.**—**Volga** (2,200 m.) and **Ural** (1,150 m.).

The **Volga** is 2,200 miles long, more than 400 miles longer than any other European river. It rises in the **Valdai Plateau** and flows by a winding course into the Caspian Sea, forming a delta with very numerous mouths.

This river is a very important waterway, and is connected with the Neva at St. Petersburg by a canal. Many commercial and manufacturing cities are upon the banks of the Volga. **Nijni Novgorod** is famous for its great fairs. **Astrakhan** is a large city on the delta. **Moscow** on the **Moskwa**, a tributary of the Oka, is the old capital of Russia and a very important centre of manufactures and trade.

FIG. 98.—RUSSIA: PHYSICAL AND POLITICAL.



Walker & Boutall sc.

LAKES.—There are two lake systems in Russia.

(*a*) **The Lake System of the Finland Plateau and the Russian Plain.**—This includes the great lakes **Ladoga**, nearly 7,000 sq. miles in area, and **Onega**, nearly half as large. These lakes, together with those of Finland, are of fresh water, and form the largest system of lakes in Europe.

(*b*) **The Salt Lakes of the South-east.**—Very numerous small salt lakes occupy the low-lying steppes to the north of the Caspian Sea.

CLIMATE AND RAINFALL.—Throughout Russia the winters are very cold and the summers hot. The country extends over about thirty degrees of latitude, and, consequently, the north is considerably colder than the south; but the difference in temperature is not so great as might be expected from the range of latitude. This is due to the absence of any high land to shelter the surface from the cold northern winds, and to the position of the country, so far from the influence of the Atlantic Ocean. The rainfall is not abundant, but it occurs during summer, when most beneficial. In winter the snowfall is heavy.

FERTILITY OF THE SOIL.—The soil of Russia varies very much in fertility. Large areas are occupied by the barren wastes of the north called **Tundras**; by swamps; and by the **Steppes** of the **South-east.** Forests cover about one-third of the surface, almost entirely in the northern half of the country. The most fertile part is the **Black Earth Region**, through which flow all the rivers between the Pruth and the Volga. Here the soil is exceedingly rich and deep, and produces abundant crops without manure.

The Baltic Provinces and Poland possess much fertile soil. Altogether about one-fourth of the surface of Russia is fit for cultivation, and nearly an equal area is pasture.

PRODUCTS.—1. **Agricultural.**—The agricultural products, like the climate, are very varied. The most general crops are cereals—**rye, oats, wheat,** and **barley. Rye** is produced in very large quantities to make the black bread which is the chief food of the people, and the **wheat** is mostly exported.

In the south and south-west, the summer is warm enough to permit of the growth of **flax, hemp, sugar-beet, tobacco,** and the **vine.**

2. **Mineral.**—Russia has a great abundance of minerals of many kinds. The chief are **coal, iron, gold, platinum, silver, zinc,** and **copper.** Others of importance are mercury, salt, and petroleum.

Coal.—The most important **coalfields** are those in the valley of the **Don** and South-west Poland.

Iron is worked on most of the coalfields, and the production is now very large.

Other districts rich in minerals are the **Urals** and the **Caucasus**, where gold, platinum, and copper are obtained. The **Caucasus** region is also rich in **petroleum**, from which **kerosene** or paraffin oil is extracted.

MANUFACTURES.—The chief manufactures, in the order of their values, are **cotton, woollen, iron, linen,** and **silk.**

The principal manufacturing districts are **Moscow** and its neighbourhood, **St. Petersburg** and towns near, and **Warsaw** and **Western Poland** generally.

TRADE.—The **internal trade** of Russia is very great, for there is an active interchange of the various products of the many European and Asiatic provinces. The **external trade** shows remarkable change and progress in the last twenty years, for, while the exports have almost doubled, the imports have actually diminished in value. This is owing to the great development of Russian manufacturing industries, which now absorb the raw material which formerly was exported.

MEANS OF INTERNAL COMMUNICATION.—**Rivers** are the chief natural means for the conveyance of passengers and goods in European Russia, and these are to some extent connected by **canals.** Thus, by the canal joining the Neva with the Volga, goods may be conveyed without transhipment from the Baltic to the Caspian Sea. **Roads** are bad throughout the greater part of Russia, owing to the absence of stone. **Railways** are not extensive in proportion to the size of the country, but are being developed. The **river** communication suffers from being frozen for many months in each year.

FOREIGN TRADE.—**Imports.**—**Raw cotton, raw metals,** with **metal wares** and **machinery, tea, raw wool** and **yarn,** and **coal** make up more than one-half of the total value of the imports.

Exports.—**Corn** and **flour, flax, timber,** various articles of **food, as fish, butter** and **eggs, linseed, petroleum,** and **hemp.**

Manufactured goods, though relatively small in value, show a decided and steady increase. The export of petroleum and its products more than tripled in value between 1887 and 1901.

SEAPORTS.—The chief ports of Russia are **Odessa, St. Petersburg, Riga,** and **Batoum.**

The bulk of the foreign commerce is carried on through the Baltic and Black Seas, for the White Sea is very remote and is frozen for over six months in the year, and the Caspian Sea is an inland lake.

The chief **Baltic ports** are **St. Petersburg** and **Riga.**

The chief **Black Sea ports** are **Odessa** and **Batum.**

The **White Sea port** is **Archangel**; and on the **Caspian Sea** are **Baku** and **Astrakhan.**

Odessa (450) is the chief outlet for the wheat produced in the Black Earth Region. It has the advantage of not being blocked by ice for so long a period as other Russian ports.

St. Petersburg (1,267) became an important port in 1885, when a deep canal was made through the shallow end of the Gulf of Finland.

Batum has developed largely in recent years through the great increase in the production and export of petroleum.

Baku and Batum are, strictly speaking, in Asiatic Russia.

TOWNS.—**St. Petersburg**, upon the Neva, is the capital and most important city in Russia Many of the inhabitants make their home in St. Petersburg in winter and in the country in summer, and hence the population varies from 850,000 in summer to over 1,200,000 in winter. This city was founded by Peter the Great in 1703, who chose the site because he wished the capital to be near the sea. Although the site chosen was a marsh, foundations were made by driving piles, and a handsome city was built. St. Petersburg is the seat of government and the chief residence of the Czar. It is also a great manufacturing and commercial city, with much foreign and internal trade.

Moscow (1,000), on the Moskwa, the ancient capital, has important manufactures, and is the centre of Russian railways. The city differs from St. Petersburg in having an Oriental appearance, with its numerous brightly coloured domes. The most remarkable building is the Kremlin.

Warsaw (750) is the commercial and manufacturing centre of Poland, and has great markets. The chief manufactures are woollen and silk goods.

Odessa (450), on the Black Sea, is the first port in Russia in value of imports and exports. The town is quite modern, and is remarkable for its mixture of races, of whom Italians predominate.

Riga (280), at the mouth of the Western Dwina, is an ancient seaport,

with great export of the products of Western Russia, such as flax, timber, tar, and resin. **Lodz**, in Poland, has cotton and linen manufactures.

Helsingfors is the capital of Finland. **Tiflis** is a large town to the south of the Caucasus Mountains, on the great trade-route across that range by the Dariel Road or Pass.

THE PEOPLE.—The **population** is estimated at over 106 millions, or about 50 to a square mile. All true Russians are **Slavs**, and these form the bulk of the people; but there are many other races, as **Germans** in the Baltic Provinces, **Finns** in Finland, **Mongols (Tartars)** in the Steppes, **Jews** in the west and south-west, and **Caucasians** in the south-east. The majority of the people belong to the Greek Christian Church.

GOVERNMENT.—Until recently, the Czar was an absolute monarch. Now, however, a constitution has been granted, the representative assembly being called the **Duma**.

FOREIGN POSSESSIONS.—Russia possesses all Northern Asia from the Urals to the Pacific, extending southward to the confines of Persia, Afghanistan, and China, and comprising Siberia and Russian Central Asia. The total area of these possessions is 6½ millions of square miles. Russian territory also extends to the south of the Caucasus into Asia, including provinces which formerly belonged to Turkey.

EXAMINATION PAPERS

A. 1. Name the boundaries of the Russian Empire, and indicate where the frontier is artificial.

2. Name the mountain ranges of Russia, show their relative heights, and compare with other mountain ranges, as the Alps or Pyrenees.

3. Say what you can of St. Petersburg, Moscow, Odessa, Warsaw, and Tiflis.

4. Describe the lake systems of Russia, showing their points of difference. Name the largest lakes.

B. 1. Describe the coasts of Russia, and state any of their disadvantages.

2. Name the rivers in their various systems, and describe the Volga.

3. Name the chief agricultural products of Russia, and indicate as far as possible where they grow most freely.

4. State the imports and exports; state which are increasing or diminishing, and show why.

C. 1. Show the position of the chief watersheds of Russia, and name the most important rivers flowing from each.

2. Name the chief minerals, and state the chief mineral-producing districts.

3 Compare the various parts of the Russian Empire, as to climate, products, and density of population.

4. Say what you can of the Steppes, the Black Earth Region, the Tundras.

AUSTRIA-HUNGARY

GENERAL DESCRIPTION.—Austria-Hungary, in the middle of the Continent, is exceeded in size by only two European countries, viz. **Russia** and **Scandinavia.** The dual name comes from the fact that what were formerly two Powers are now united under one ruler. Hungary has been a kingdom for about 800 years; Austria is an accumulation of states, which have gradually grown into a single empire. The Emperor of Austria is also King of Hungary, the union having been effected in 1867. Physically, Austria and Hungary are very different; the latter is an extensive plain surrounded by mountains; the Austrian states are mountainous and lie in a semicircle round the west and north of Hungary.

The whole **area** is about **240,000 sq. miles.** (Compare with Burma.)

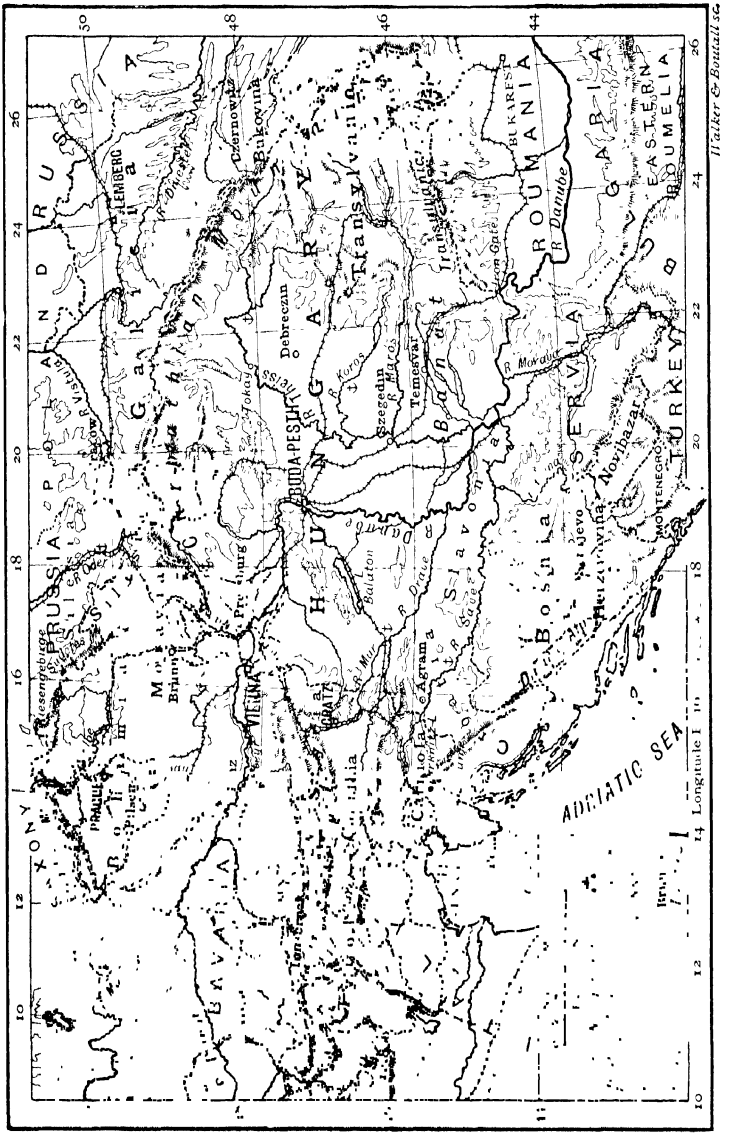
BOUNDARIES.—Austria-Hungary has many natural boundaries. On the **north-west**, the **Alps, Bohmer Wald, Erzgebirge** and **Sudetes Mountains**; on the **south-west** the **Adriatic Sea**; on the **south** the **Danube** and **Transylvanian Alps**; on the **east** the **Carpathians**; and for a short distance on the **north**, the river **Vistula.** Only in the north-east are the boundaries artificial.

COAST-LINE. The coast-line is, for the area, very short, Austria and Hungary each having a strip on the island-fringed coast of the Adriatic. **Trieste** is the port of Austria; **Fiume** of Hungary. The Adriatic Sea is exposed to severe storms.

RELIEF.—Austria-Hungary consists of a great **plain** surrounded by mountain ranges which extend into plateaux in the north-west and east. The **Plateau of Bohemia**, in the north-west, is surrounded by mountains. **Transylvania**, in Eastern Hungary, is also an extensive plateau.

MOUNTAINS.—The mountains are in three systems.

1. The **Alps**, in the west, are a continuation of the Swiss mountains. The **Julian** Alps, which extend to the south-east,


PRUSSIA
RUSSIA
Galicia
Transylvania
HUNGARY
ROUMANIA
SERVIA
TURKEY
BUKAREST
EASTERN ROUMELIA
Bosnia
Slavonia
Bukowina
Czernowitz
LEMBERG
Debreczin
Szegedin
Temesvar
BUDA-PESTH
Prague
Pilsen
Brünn
VIENNA
Agram
Novibazar
MONTENEGRO
Jevo
Herzegovina
Balaton
R. Danube
R. Vistula
R. Oder
R. Mur
R. Drave
R. Save
R. Maros
R. Koros
R. Theiss
R. Morava
Tokay
Riesengebirge
Sudetes
Iron Gate
ADRIATIC SEA
Longitude E
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connect the Alpine with the **Balkan** mountain systems. The Alps gradually diminish in height as they approach the Hungarian plain, and as they stretch towards the Balkans.

2. The **Carpathians** describe a great curve, about 1,000 miles in length. These mountains are very steep and rugged, but much less in height than the Alps, the highest point being under 9,000 ft., and the average height about 6,000 ft.

3. The **Northern Mountains**, separating Austria from Germany—the **Erzgebirge, Riesengebirge, Sudetes,** and **Böhmer Wald.** These mountains are still lower than the Carpathians, the highest peak being under 6,000 ft.

RIVERS.—Numerous large and important rivers drain Austria-Hungary, but the country does not possess the mouth of one navigable stream.

The rivers can be divided into two groups—viz. 1. those draining the outer slopes of the mountains; 2. those draining inward to the centre of the country.

1. **Rivers Draining the Outer Slopes. Dniester,** into the Black Sea; **Vistula** and **Oder,** into the Baltic Sea; **Elbe,** draining the Bohemian Plateau and flowing through Germany into the North Sea; the **Adige,** into the Adriatic Sea.

2. **Rivers Draining the Inner Slopes.**—The **Danube** and its tributaries, flowing into the Black Sea.

The **Danube** (1,700 m. long) flows through Southern Germany and Austria-Hungary, and then separates Roumania on the north from Servia and Bulgaria on the south. This river receives very many tributaries, several of which are themselves large streams—*e.g.* the **Save** and **Theiss.** The Danube is navigable for many hundreds of miles; but its banks are swampy, more especially in Hungary and in its lower course, and therefore comparatively few large towns are built on it below **Buda-Pesth** The most remarkable part of its course is where, on leaving Austria, the river flows for over seventy miles through a defile caused by the approach of two mountain ranges, the **Balkans** and **Carpathians.** Here the stream is narrow and shallow, but has been deepened at great cost.

Some of the largest towns on the Danube in Austria are **Linz,** an important trade centre; **Vienna,** the capital and largest city in the empire; and **Buda-Pesth,** the capital of Hungary. On tributaries are **Innsbruck,** on the **Inn,** an important town in the Tyrol; **Gratz,** on the **Mur,** the largest town in the Alpine provinces.

LAKES.—The largest lake in Austria-Hungary is **Balaton,** west of the Danube, in the Hungarian Plain.

CLIMATE AND RAINFALL.—In such a large country as Austria-Hungary, with so much diversity of surface, there is naturally considerable variety of climate; but, generally speaking, the winters are cold and the summers are warm.

The heat of summer is accounted for by—

1. The latitude, from about 45° S. to 50° S.
2. The country is near enough to Africa to come under the influence of hot winds.

The severity of the winter is produced by—

1. The cold winds from east and north, which find an easy entrance over the eastern and northern mountains and sweep over the great plains.
2. The elevation of the surface of much of the country.

The **rainfall** is unevenly distributed, being plentiful among the mountains but scanty on the plains.

FERTILITY OF SOIL.—The soil of Austria-Hungary is fertile, especially in the great river valleys. About nine-tenths of the surface is either cultivated land, pasture, or woodland. In the great plains of Hungary are large tracts which produce only pasture, and suffer much from summer drought and winter frosts.

The Alpine regions of the Tyrol contain the largest proportion of quite unproductive surface.

PRODUCTS.—Agricultural.—1. **Cereals: Oats, rye, barley,** and **wheat.**

Hungary is especially noted for the production of hard wheat, which makes very fine flour and is in great demand.

2. **Potatoes, sugar-beet, hops,** and **maize** are important crops.

3. **Wine** is grown on the sunny hill-slopes of the Alpine regions and in Hungary. **Silk** is produced in the **Adige** Valley.

4. **Timber** is a very valuable product, its cultivation being carefully fostered by the Government. The great forests are upon the **Carpathians** and **Alps.**

Mineral.—Austria-Hungary is rich in minerals. **Coal**—including common coal and brown coal—**iron, salt, silver,** and **quicksilver.**

The greater part of the mineral wealth is found in the Austrian provinces.

MANUFACTURES.—The great bulk of the manufacturing industries is carried on in the Cis-Leithan Provinces, Hungary and the other Trans-Leithan States being almost entirely agricultural or pastoral. The provinces which are richest in coal—viz. **Bohemia, Moravia,** and **Silesia**—are the chief centres of manufacturing industries. The chief manufactures are **woollen, linen, cotton** and **jute, iron** and **steel.**

The chief manufacturing towns are **Vienna,** where a variety of goods is produced—viz. silks, machinery, porcelain, and fancy goods generally; **Brünn,** woollen goods; **Gratz,** iron manufactures; **Buda-Pesth,** silks, velvets, and flour.

TRADE.—The foreign trade of Austria-Hungary, although showing a large increase in the last twenty years, is small compared with that of some other European countries.

MEANS OF INTERNAL COMMUNICATION.—Speaking generally, the means of communication throughout the empire are capable of considerable improvement. As in Germany and France, the rivers afford convenient means for the carriage of passengers and goods, the chief navigable streams being the **Danube** and **Elbe.** The former affords a waterway for a large portion of the empire, while the latter connects Bohemia with Hamburg.

Railways are numerous and convenient in the great manufacturing provinces, but they are lacking in Hungary, where large tracts of country are remote from railways.

TRADE.—The chief **imports** are raw materials for manufacture—**cotton, wool, hides, silk**; and **coal, machinery,** and **tropical produce.**

The **exports** consist mainly of the products of forests and farms—**wood** and **woodwork, cattle, eggs,** and **sugar.**

The trade is maintained chiefly with the adjoining countries. The chief seaports are Trieste and Fiume, on the Adriatic Sea.

DIVISIONS OF THE EMPIRE.—The provinces composing the empire are divided into **Cis-Leithan** and **Trans-Leithan** States. This name is derived from the **Leitha,** a tributary on the right bank of the Danube, to the east of Vienna. The Cis-Leithan States (*cis*, on this side of) are those on the west of the Leitha; the Trans-Leithan States are those on the east of that river.

TOWNS.—**Cis-Leithan Provinces.**—As these provinces carry on the chief manufacturing industries, there are more very large

towns than in Hungary. There are six towns with more than 100,000 inhabitants in the Cis-Leithan States compared with only one in the Trans-Leithan States.

Vienna (1,674), the capital of the Austrian Empire, is the fourth city of Europe in population. It is well situated upon the Danube, by which great trade is carried on. It is also at the meeting of the trade routes from Silesia and Italy. Like Paris, the city is the centre of many manufactures, including silks, machinery, and fancy wares of many kinds.

Prague (201), in Bohemia, upon the Moldau, a tributary of the Elbe, is an important manufacturing and trading city. It is the centre of the chief manufacturing district in Austria, where woollen and cotton goods, glass and porcelain are produced.

Trieste (180), in the Coast Land, is the chief port.

Lemberg (159) and **Cracow** (91) are ancient and important towns in Galicia.

Trans-Leithan Provinces. — **Buda-Pesth** (732), upon the Danube, Buda being on the right and Pesth on the left bank. Buda is an old German town, while Pesth, a Magyar town, has a very different appearance. Fine bridges connect the two towns, which are great centres of trade and the chief seat of manufactures in Hungary, the most important being silk, velvet, and flour. The united towns form the capital of the Trans-Leithan Provinces.

PEOPLE.—The population of Austria is over **26 millions**; of Hungary, **19 millions**—total, **45 millions**, or **180 to a square mile.** Austria-Hungary contains the greatest admixture of races in Europe. **Slavs** and **Germans** form the bulk of the population, and there are between six and seven million **Magyars** in Hungary. The Magyars were a non-Aryan race, from the north of Asia, who settled in Hungary at the end of the ninth century.

GOVERNMENT.—Austria-Hungary has a **Limited Monarchy**. The Emperor of Austria is also King of Hungary, and his power in both capacities is limited by elected **Parliaments.** Throughout the empire the people of the various states have a considerable share in the local government, each province and commune having its own elected body.

FOREIGN POSSESSIONS.—Austria-Hungary has no colonies like those of England or Holland, but rules the provinces of **Bosnia** and **Herzegovina**, and has troops in the adjoining district of **Novibazar**, though the latter is ruled in civil matters by Turkey.

Bosnia, Herzegovina, and **Novibazar** consist of hilly country, with many ranges parallel to the **Dinaric Alps** and long valleys sloping to the north.

The area is over 23,500 sq. miles, or more than twice the size of Belgium. These provinces are bounded by the R. **Save** on the north, the R. **Drina** on the east, and the **Dinaric Alps** on the west. The soil is fertile and is watered by many streams flowing into the Save. The chief vegetable products are **timber** (forests cover nearly one-half of the surface), **maize** and **wheat**, **plums** (which are dried in large quantities for export), and the **vine**. **Minerals** are abundant, but little worked.

The chief town is **Serajevo** (26), the capital of Bosnia and the centre of trade.

EXAMINATION PAPERS

A. 1. Name the countries touching Austria-Hungary, with the boundaries, indicating where the boundary is artificial.

2. Describe the position of the Austrian Alps and Carpathians; name the different parts of these systems; compare the average heights and name the highest peaks.

3. Name the chief manufacturing provinces in Austria and the industries specially carried on in each. Give any reasons for the manufactures being located in these districts.

4. Name the rivers of Austria-Hungary, and give an account of the Danube, naming the countries drained by it, the causes of obstructions in its course, and the chief towns on the banks of the main stream or tributaries.

B. 1. Say what you know of the soil of Austria-Hungary, and name the chief vegetable products.

2. Name the seaports of Austria-Hungary, and say what you can of their trade and relative importance.

3. Name the great races of people in Austria-Hungary, together with the provinces in which such races are most numerous.

4. Compare and contrast Austria-Hungary with Germany.

SWITZERLAND

GENERAL DESCRIPTION. — Switzerland occupies the middle and highest portion of the mountainous core of Europe, its surface being almost covered with the Central Alps. The mountainous character of the country—its lakes, its snow-capped peaks, its glaciers, and its waterfalls—render the scenery of Switzerland among the most beautiful in the world, and it is visited by thousands of tourists annually. It is on this account called the 'playground of Europe.' It is surrounded by four great countries—France, Germany, Austria-Hungary, and Italy

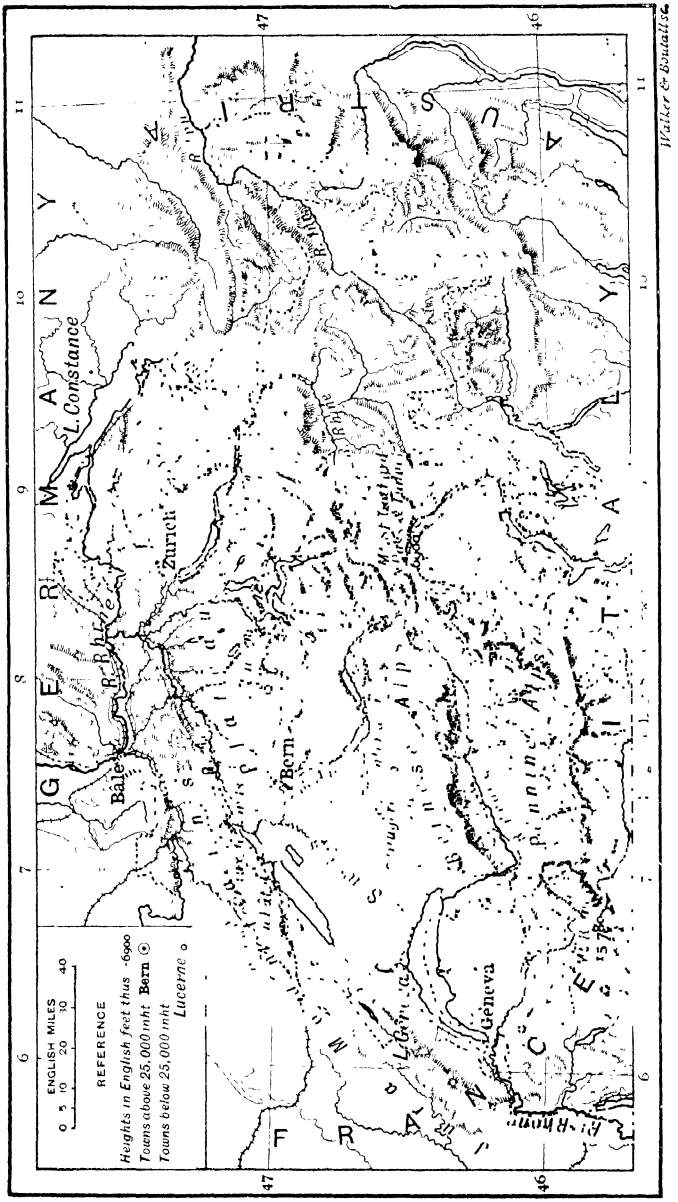


FIG. 100.—SWITZERLAND: PHYSICAL AND POLITICAL.

—whose plains are fertilised by the abundant streams which are formed by the melting of the snows and glaciers on the Swiss mountains.

SIZE.—Nearly 16,000 sq. miles in **area**, or about two-thirds the size of Ceylon.

RELIEF.—Along the western border lie the parallel ranges of the **Jura** mountain system; south-east of a line between **L.** Geneva and **L.** Constance lies the great **Alpine** system.

FIG. 101. SWITZERLAND: RELIEF.

Between those two lies the **Swiss Plateau**, which is in many places hilly on account of spurs from the Jura and Alps.

The **Swiss Plateau** covers less than one-third of the surface, but has the majority of the inhabitants and nearly all the soil capable of producing such crops as corn.

RIVERS AND LAKES.—Switzerland is watered by a large number of streams, which form the headwaters of important rivers.

The **Rhine** rises in Mount St. Gothard, and, passing through Lake **Constance**, is joined by the **Aar**, which drains **Lakes Zürich, Lucerne**, and **Neuchâtel.**

The **Rhone** also rises in Mount St. Gothard, and, flowing through a deep valley between the Bernese and Pennine Alps, passes through **Lake Geneva** and enters France.

The **Po** is mainly the product of streams which rise in Switzerland and, flowing through transverse valleys, enter the Italian plains.

The **Inn** drains a considerable portion of Eastern Switzerland, and joins the Danube in Austria.

CLIMATE AND RAINFALL.—Switzerland has severe winters owing to the great elevation of most of the surface, with very great snowfalls. The summers are generally short, but very hot in the lower valleys, while the atmosphere in the higher portions is then remarkably bracing and fresh. The rainfall is generally abundant.

FERTILITY OF SOIL.—Generally speaking, the soil of Switzerland is not fertile, and has only been made productive by the industry of the people. Only about a quarter of the surface is under crops, half under grass and forest, and the remainder consists of unproductive mountain tops.

PRODUCTS.—1. **Agricultural.**—Hay; oats, wheat, and rye; grapes and tobacco. The cereals produced are not nearly sufficient for the support of the people, and much has to be imported.

2. **Animal.**—Cattle, goats, swine, and sheep.

Large quantities of cheese and condensed milk are made and exported.

MANUFACTURES.—The leading manufactures are **silk, cotton, watchmaking, cheese,** and **wine.**

Silk, spinning and weaving, chiefly at **Zürich** and **Bâle.**

Cotton, chiefly at **Zürich.** Swiss cotton yarns are remarkable for fineness.

Watchmaking.—Mostly in the valleys of the **Jura.** **Geneva** is the chief place from which the watches are exported, and hence they are known as Geneva watches.

Switzerland may be said to have an 'industry of hotels,' so large is the number of these institutions for the convenience of tourists, and of the people employed in their up-keep.

MEANS OF INTERNAL COMMUNICATION.—Swiss roads and railways are a great example of the triumph of human skill and energy over natural obstacles. During the nineteenth century, excellent carriage roads were made over the chief passes, and in recent years communication with Southern Europe has been made easy by the construction of the great railway tunnel through Mount St. Gothard.

IMPORTS.—The chief are **raw materials**, as silk, cotton, and wool; grain; metals, minerals, and machinery.

EXPORTS.—Manufactured products, silk and cotton fabrics, watches, condensed milk, and cheese.

DISTRICTS AND TOWNS.—The twenty-two divisions are called cantons. The chief towns are:—

Zürich.—This town has very extensive suburbs, which make the total population 152,000, though the town itself has less than 30,000. It is the chief town in German Switzerland, and is famous for its commerce and educational establishments.

Geneva (105), on the south-western end of Lake **Geneva**, is a handsome busy city.

Bâle (111), situated on the **Rhine**, where it turns northward; a busy manufacturing town with much trade.

Bern (64), on the River **Aar**, the political capital of the Republic.

POPULATION.—Nearly 3,375,000, or 207 to a square mile.

THE PEOPLE AND LANGUAGE.—There is, properly speaking, no separate Swiss language, and the people are made up of a German-speaking race who form the majority and occupy the plateau, and French- and Italian-speaking peoples, who live in the south and west

GOVERNMENT.—A **Federal Republic**, with two elected Houses called the State and National Councils.

Each canton is independent in the control of its local affairs.

EXAMINATION PAPERS

A 1. Describe the relief of Switzerland.

2. Name the natural products of Switzerland, indicating those that are insufficient in quantity.

3. Mention the principal imports and exports, and name the chief countries engaged in trade with Switzerland.

4. Write what you can of Zurich, Bâle, Geneva, Bern, Lucerne, Neuchâtel.

B. 1. Name three important rivers whose sources are in Switzerland; indicate where they rise, name any tributaries, and show direction.

2. Say what you can of the Jura Mountains, their position, direction, height, formation, and occupation of the inhabitants.

3. Name the manufactures of Switzerland; name districts and towns where they are carried on, and give any interesting facts concerning them.

4. Give an account of the Alpine system, stating position, direction, height, names of divisions and ranges, and four well-known peaks.

SPAIN AND PORTUGAL

GENERAL DESCRIPTION.—Spain and Portugal make up the Iberian Peninsula, the great, almost square-shaped piece of land which forms the south-western portion of Europe. The greater part of its surface forms a tableland which is divided into distinct portions by mountain ridges, called **sierras**, lying almost parallel with each other across the country from east to west. The slope of the tableland is generally to the west, and, as the chief watershed is nearer to the east than to the west coast, the long rivers nearly all flow to the Atlantic Ocean. The elevation of most of its surface causes the Peninsula to have cold winters; and, as the bordering mountain chains receive most of the rain, the interior of the country also suffers from drought, and the rivers vary very much in volume at different seasons. The natural resources of the country, especially in mineral wealth, are great, but have been much neglected. Steady progress is now being made in developing the soil, the mines and manufactures.

BOUNDARIES.—**North.**—The north coast is washed by the **Bay of Biscay.** Spain is separated from France by the **Pyrenees Mts. West.**—The **Atlantic Ocean. South.**—The **Atlantic Ocean, Strait of Gibraltar,** and **Mediterranean Sea. East.**—**Mediterranean Sea.**

The **Strait of Gibraltar** is only thirteen miles wide in its narrowest part and is guarded by the two great promontories **Gibraltar** and **Ceuta** on opposite sides, which were called by the ancients **The Pillars of Hercules.** Gibraltar is a fortress of immense strength, which has been held by the British since 1704.

SIZE.—**Spain,** nearly 200,000 sq. miles. **Portugal,** 34,000 sq. miles. (Compare with Burma.)

COAST-LINE.—Except in the north and north-west, the coast is very little broken, and consists of long stretches of low-land lying between headlands. The openings in the north-west somewhat resemble fjords.

The lack of great openings is a disadvantage to the Peninsula in commerce.

CAPES.—**Ortegal** in the north. **Finisterre** (Land's End) in the

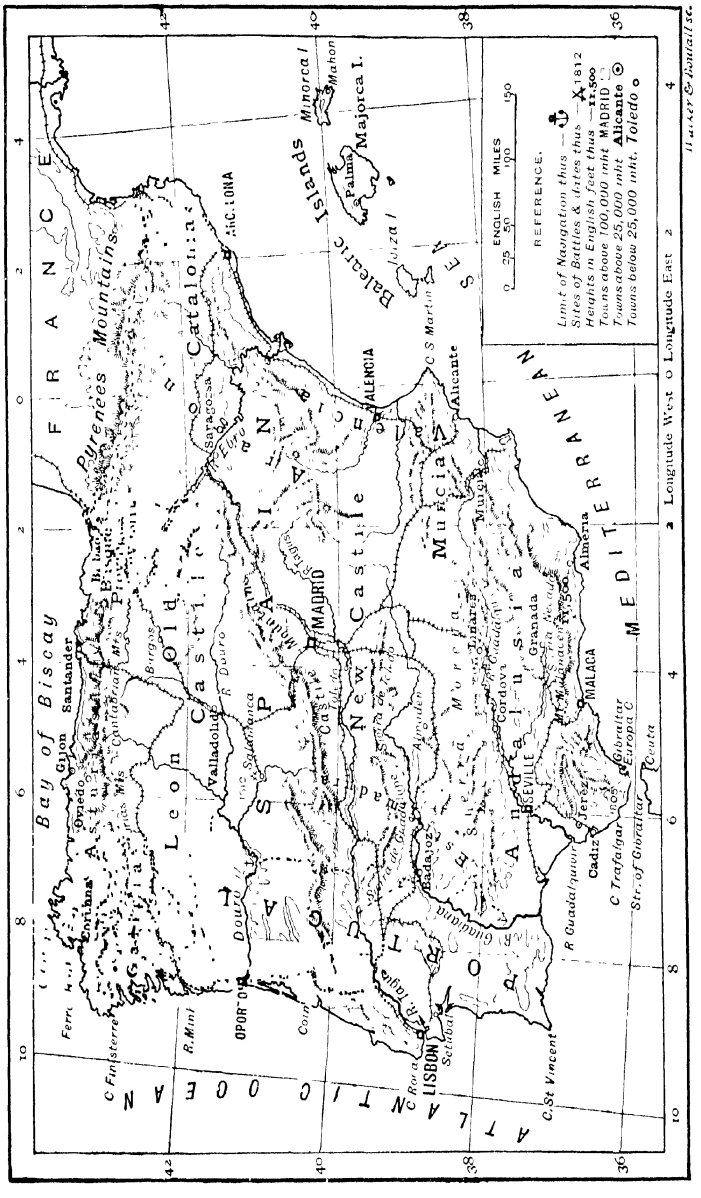


FIG. 102.—SPAIN AND PORTUGAL: PHYSICAL AND POLITICAL.

Longmans & Co London & New York.

north-west. **Roca**, the most westerly point. **St. Vincent** in the south-west. **Trafalgar** in the south. **Europa** on Gibraltar.

ISLANDS.—**Balearic** Islands in the Mediterranean; the chief are **Majorca**, **Minorca**, and **Iviza.**

RELIEF.—The great plateau covers almost the whole surface, and the general slope is to the west. The only extensive valleys are those of the rivers—the **Ebro** in the north-east, the **Guadalquivir** in the south, and the **Tagus** and **Guadiana** in the south-west.

MOUNTAINS.—1. **Northern Mountains.**—The **Pyrenees**, continued along the north coast in the **Asturias** Range.

The Pyrenees somewhat resemble the Caucasus in being high and steep with few passes. The greatest elevation is over 11,000 ft.

2. **Mountains of the Plateau.**—The ranges are called **Sierras**, from the resemblance of a line of peaks to a saw.

From north to south the chief sierras are the **Castile System**, which lies across the middle of the country, and extends into Portugal. **Sierra de Toledo** and **Sierra de Guadeloupe**, which separate the valley of the Tagus from that of the Guadiana. **Sierra Morena**, forming the southern edge of the plateau.

3. **Southern Mountains. Sierra Nevada**, or snowy range, higher even than the Pyrenees, the highest peak being 11,500 ft.

RIVERS.—The **Spanish Peninsula** is not well watered. The rivers vary very much in volume at different seasons, and often flow between banks too steep to admit of the water being used in the making of canals, either for commerce or for irrigation.

The rivers flowing into the Atlantic Ocean are the **Minho Douro** (460 m.), **Tagus** (510 m.), **Guadiana** (450 m.), **Guadalquivir.** The only river of importance flowing into the Mediterranean Sea the Ebro (420 m.).

The **Guadalquivir** and the **Ebro** are the only rivers which can be ascended by vessels for any considerable distance, and these two rivers are also used in irrigating large tracts of country.

CLIMATE AND RAINFALL.—Spain extends southwards to 36° N. lat., and therefore the summer heat is considerable; but, owing chiefly to the elevation of the surface, the winter is remarkably severe over most of the Peninsula. Rain is abun-

dant in the north and west, but the country generally suffers from drought.

FERTILITY OF SOIL.—Where the rainfall is sufficient, the soil is very productive. In the south and east the soil in places is made fertile by irrigation. On the plateau the dryness of the climate accounts for the barrenness of the soil, and very large areas are covered only with scanty grass.

In Portugal the surface is rugged, and a considerable portion is unproductive.

PRODUCTS.—1. **Agricultural.**—As in France, the **vine** is the most valuable product, grapes, raisins, and wine being exported in large quantities, and as in other Mediterranean lands many kinds of **fruit** are grown, the most important being **oranges**, **figs**, and **olives.**

Field crops are not so important—and wheat has to be imported. The chief crops grown are **wheat, maize**, and **rye. Cork**, the bark of a species of oak which is found all over the peninsula, is one of the chief resources.

2. **Animal.**—The **Merino Sheep** is extensively reared on account of the fine texture of its wool. **Mules** and **asses** are the chief beasts of burden on the mountains. The **silkworm** supplies raw silk.

3. **Mineral.**—The peninsula is very rich in minerals. **Coal** and **iron** are found in the Cantabrian Mountains, and the Rio Tinto mines in the Sierra Morena supply one quarter of the world's **copper. Lead** is mined in the Sierra Nevada, and the **quicksilver** mines of Almaden have long been famous.

MANUFACTURES.—Manufacturing industries occupy only a small proportion of the inhabitants of Spain and Portugal, but the quantity of goods manufactured in Spain is steadily growing.

The almost universal manufacture is **wine.** Two districts are especially noted for wine production :—1. The neighbourhood of **Seville** in Southern Spain, where sherry is produced and takes its name from the town of **Jerez.** 2. The district near **Oporto** in Portugal, where port wine is largely produced.

Other manufactures in Spain are **iron, cotton,** and **silk.**

Portugal, in addition to wine, manufactures **salt** and **corks.**

TRADE.—An active and increasing trade is carried on in

the coast provinces; but the thinness of the population in the interior and the difficulties of communication cause the internal trade to be relatively small. The commerce consists of the interchange of the products of mines, forests, vineyards, and gardens for raw cotton, manufactured textile and metal goods, articles of food such as wheat, and tropical produce.

MEANS OF INTERNAL COMMUNICATION.—The **rivers** are of but little use in commerce, and **canals** are very few. **Roads** are bad in Spain and Portugal, and the coasts are lacking in deep inlets. The **railway** system is not extensive, but is growing. Much of the internal trade is still upon mules' backs on the rough roads of the mountain districts.

FOREIGN TRADE.—SPAIN.—Imports.—Raw cotton and **cotton goods, coal, timber** (especially for making casks), **woollen goods, iron goods** and **machinery, wheat, sugar,** and **fish.**

Exports.—Wine, minerals, and **metals**—viz. iron, copper, lead, zinc, and quicksilver—**fruits** and **cork.**

PORTUGAL.—Imports.—Wheat, woollen goods, machinery, iron, and **coal.**

Exports.—Wine, cork, fish, and **copper.**

SEAPORTS.—SPAIN.—Barcelona (509), **Valencia** (204), **Seville** (146), **Malaga** (125), **Bilbao** (74).

Barcelona is the chief seaport of Spain, with a large import of raw cotton for manufacture.

Valencia, Seville, and **Malaga** export fruit and wine.

Bilbao extensively exports iron ores, especially to South Wales.

PORTUGAL.—The chief ports of Portugal are Oporto (172) and Lisbon (357).

Oporto, at the mouth of the Douro, is the outlet for the produce of the most thickly peopled district in the Spanish Peninsula. It is especially famous for the export of port wine.

Lisbon, upon the estuary of the Tagus, is splendidly situated and has much trade.

TOWNS.—SPAIN.

Madrid (512), the capital of Spain, is situated upon the plateau at a greater elevation than any other European capital. It stands upon the R. Manzanares, which is very variable in volume and of no use for commerce. The city has an unpleasant climate owing to its great extremes of heat and cold, and is only important as the capital.

Barcelona (509) is the chief manufacturing city of Spain and the first seaport. An important and growing manufacture of cotton goods is carried on, and large quantities of nuts and fruits are exported.

Valencia (204) and **Alicante** are seaports on the Mediterranean coast famous for export of fruit.

Seville (146) is a very ancient city, with thriving trade in wine and fruit, and has manufactures of iron and silk.

Malaga (125) is a seaport with much trade, especially the export of fruit. **Granada** is famous for its Moorish remains, especially the palace called the Alhambra, and was the last fortress held by the Moors in Spain.

Cadiz is an ancient seaport, with a good roadstead but a poor harbour. **Jerez** has a very great export of sherry wine. **Bilbao** has manufactures of iron and a great export of iron ore.

Valladolid is the chief place of internal trade in Northern Spain.

Toledo was once known throughout the civilised world for its manufacture of sword-blades, and still carries on the industry. **Almaden** is well known for its nearness to the famous quicksilver mines.

The **Balearic Islands** consist of three large islands—**Majorca, Minorca,** and **Iviza**—and a number of smaller ones, with a total area of nearly 1,900 sq. miles. They are very populous, and produce much fruit and olives.

The **Canary Islands** lie off the West Coast of Africa, and have an area of over 2,800 sq. miles. The chief islands are **Teneriffe** and **Grand Canary.**

Teneriffe is famous for its great volcanic peak rising from the Atlantic to a height of 12,000 ft.

The chief town is **Santa Cruz.** These islands are much visited by English people in search of health, the climate being very delightful.

TOWNS.—PORTUGAL.

Lisbon (357) is the capital of Portugal and has considerable trade. The city was destroyed by an earthquake in 1755, and most of the present buildings are quite modern.

Oporto (172). *See* Seaports.

The **Azores** lie far out in the Atlantic, and afford a convenient refuge for disabled vessels. The chief island is St. Michael, famous for its oranges.

The **Madeira Islands** are off the coast of Africa, north of the Canaries. The chief town is **Funchal,** a calling station for mail and other vessels.

POPULATION.—Spain, 18 millions; Portugal, 5½ millions.

Portugal is considerably more densely peopled than Spain.

THE PEOPLE are the result of a mixture of races. Celtic, Latin, Teutonic, and Moorish peoples have in turn invaded and possessed the whole or parts

of the Peninsula. The earliest known inhabitants are the Iberians, whose direct descendants, the Basques, still inhabit the northern provinces, and are the only pure race in Spain.

GOVERNMENT.—Limited monarchy in each country, with two Houses of Parliament, known as the **Cortes**.

FOREIGN POSSESSIONS.—Portugal has great foreign possessions. In **Africa**, **Cape Verde** Islands; Portuguese **West Africa**, a vast district between the Rivers **Congo** and **Cunene**; and **East Africa**, another great province between **Zululand** and the R. **Rovuma**. In **Asia**, **Goa** in India, part of **Timor** in the Malay Archipelago, and **Macao** in China.

SPAIN has in **Africa**, **Fernando Po** and various other settlements on the West Coast.

The Rock of **Gibraltar**, a promontory near the most southerly point of Spain, with an area of nearly 2 sq. miles and an elevation of over 1,400 ft., has been in British possession since 1704, and is governed as a Crown Colony. The population is about 27,000, of which over 5,000 form the garrison.

The nearest point of Africa is only 13 miles distant, so that Gibraltar commands the entrance to the Mediterranean.

EXAMINATION PAPERS

A. 1. State the size and give position and boundaries of Spain and Portugal.

2. Give an account of the river system of the Iberian Peninsula, showing general direction and peculiarities, and name the chief streams.

3. State the vegetable, animal, and mineral products of Spain.

4. Where and what are the following:—Finisterre, Europa, Iviza, Ebro, Minho, and Roca?

B. 1. Describe the surface of Spain and Portugal, showing what parts are elevated and what lowland, and name the chief mountain ranges.

2. Name six seaports of Spain and Portugal, naming any special exports or imports connected with them.

3. Name the manufactures and state the chief manufacturing provinces of Spain and Portugal.

4. Name the chief imports and exports of Spain and Portugal.

ITALY

GENERAL DESCRIPTION.—Italy is naturally divided into two portions—viz. (1) the extensive **Northern Plain**, bordered by mountains on north, west, and south, and extending to the sea in the east; and (2) a long **peninsula**, almost filled with

mountains, which approach so nearly to the sea on both sides as to leave only narrow strips of lowland on the coasts. Consequently there are few long rivers, the only important one being the **Po**, which drains the Northern Plain. The climate is generally pleasant, and the rainfall fairly abundant; and, as the soil is mostly fertile, the agricultural products are varied and plentiful. The country has a very ancient history, and has played a very important part in the growth of civilisation and the spread of Christianity.

BOUNDARIES.—1. **North.**—The Alps. 2. **West** and **East.** The Mediterranean Sea.

The Alps on the north are very lofty and have an important effect upon the climate, but have never proved very formidable barriers against invasion. (Contrast with Himalayas.)

SIZE.—Over 114,000 sq. miles, or about as large as the United Provinces of Agra and Oudh.

COAST-LINE.—In outline Italy resembles a long riding-boot, with **Cape Spartivento**, the most southerly point of the mainland, at the toe, and **Cape di Leuca** at the heel.

The bend in the north-west is called the **Gulf of Genoa**, and here the coast is steep, the Alps descending sharply into the sea. This coast is known as the **Riviera**, and is much frequented in winter for its charming climate, the background of mountains forming a barrier to the cold north winds. In other parts the coasts are mostly low.

The **Bay of Naples** on the west is very beautiful. The large opening in the south is the **Gulf of Taranto**, and on the east is the **Adriatic Sea**, in which severe storms sometimes occur.

Sicily is divided from the mainland by the **Strait of Messina**, and the **Strait of Bonifacio** lies between **Corsica** and **Sardinia**.

Corsica belongs to France. **Elba** is famous as the residence of Napoleon I. from the Treaty of Paris in 1814 to the spring of 1815.

RELIEF.—In the north is the **Plain of Lombardy**, well watered and very fertile, and hence very productive and populous.

Marshy and, in some cases, unhealthy lowlands lie near the coast in many parts, the best known being the **Roman Campagna** (*Cam-pān-ya*).

The crest of the **Alps** forms the northern boundary, and here many spurs, between which flow tributaries to the Po, extend into

the Northern Plain. At their western end the Alps bend round, and are continued under the name of the **Apennines**, throughout the whole length of the peninsula, and into Sicily. The highest peak, **Mt. Corno**, is near the centre of the range. **Mt. Vesuvius**, near Naples, and **Mt. Etna** in Sicily, are famous active volcanoes.

RIVERS.—**Italy** is, on the whole, a fairly well-watered country, but lacks navigable streams.

The chief river is the **Po** (450 m.), which drains the Plain of Lombardy, and, being largely fed from the glaciers of the Alps, maintains its volume in summer. This river is navigable for a long distance, and also is of great service in irrigation because of its surface being above the level of the country through which it flows. This raising of the bed is due to the great amount of solid matter brought down by the tributary streams. Many large and famous cities are situated in the basin of the Po, some of the chief being **Turin**, **Milan**, and **Verona**.

The **Adige** drains a large part of the **Tyrol**, and after flowing through the Northern Plain enters the **Adriatic Sea** a little to the north of the Po.

The **Tiber** (210 m.) and the **Arno** (150 m.) are the chief rivers of the Italian Peninsula. The latter is navigable by boats as far as **Florence**, and the former by small vessels to **Rome**, but both rivers vary much in volume at different seasons.

LAKES.—Italy has a considerable number of lakes, of which the most famous are those which lie in the southern valleys of the Alps. The chief are **Maggiore**, **Como**, and **Garda**.

CLIMATE AND RAINFALL. Compared with Spain, Italy has a better rainfall, and not such great extremes of heat and cold. The climate varies considerably in the southern, central, and northern portions. The south suffers from a hot African wind, called the sirocco, and has a deficient rainfall. Hence the climate of this part resembles that of Spain. Central Italy has a pleasant climate and sufficient rainfall. The Northern Plain has hot summers, but suffers from cold winds from the Alps in winter.

FERTILITY OF SOIL.—Only about one-eighth of the soil of Italy is actually unproductive, and about the same proportion is forest land. The remainder is either pasture or agricultural land, but the latter varies very much in fertility. The richest soil is that of the Northern Plain, which is irrigated by the waters of the Po, and produces great and frequent crops of rice and grass. The lower valleys of the rivers are generally very productive, but the uplands are mostly under pasture.

FIG. 103.—ITALY.

Walker & Boutall sc.

Longmans & Co London & New York.

PRODUCTS.—Agricultural.—1. Wine, as in France, is the most valuable product, but is generally only of moderate quality.

2. **Cereals.—Wheat, maize, pulse, rice,** and the other European grain crops.

3. **Olives** are largely grown, and much oil is extracted.

4. Other crops are **hemp, flax, cotton, tobacco,** and **fruits.**

5. **Cheese** is produced largely on the rich pastures of Lombardy.

Animal.—Cattle, sheep, and **goats** are numerous. **Silk** is produced in large quantities in all parts, but especially in the northern provinces of Piedmont and Lombardy. **Fishing** for coral, sponges, and tunny employs many men.

Mineral.—Coal is deficient in quality and quantity, and much has to be imported. **Sulphur** is very abundant in the volcanic island of Sicily, and is largely exported. Much **iron ore** of excellent quality is obtained in the island of Elba. **Marble** is plentiful, that of Carrara being the most famous.

There are many other ores, but they are not extensively worked.

MANUFACTURES.—The **silk** industry is the most important, and employs a large number of persons, most of whom are engaged in **reeling** the silk, which is then largely exported to France.

Artistic articles in glass, marble, wood, coral, lace, cameos, straw, and earthenware are produced in many cities, and are the most widely known of Italian exports.

The manufacture of **iron** and of **cottons** and **woollens** is being steadily developed, the latter chiefly in places where water power is available.

The chief manufacturing towns are **Milan** and **Genoa**, which produce silk goods; **Venice**, lace and glass; **Florence**, earthenware and mosaics; and **Naples**, cameos, corals, &c.

TRADE.—Italian trade is steadily growing in volume, especially northwards through the Alpine tunnels and eastwards by the Suez Canal. Perishable goods are now carried by rail northwards to Antwerp, and thence to the British Isles. A very active interchange of products is carried on between Italy and Germany.

MEANS OF INTERNAL COMMUNICATION.—In the Northern Plain commerce is easily carried on both by the rivers and railways, of which a good system exists. In the Peninsula the railways mostly follow the coasts, with branch lines inland, but these lines are seldom carried over the Apennines. Roads are mostly bad, except such as follow the old Roman roads. Canals for navigation are of small importance.

FOREIGN TRADE.—Imports.—Coal, wheat, and **raw cotton** are the most important.

Exports.—Silk (cocoons, raw, thrown, and manufactured), much the most valuable, **wine, eggs, sulphur, raw hemp,** and **flax.**

SEAPORTS.—The chief ports in their order of importance, judged by the tonnage of vessels entering and leaving, are **Genoa, Naples, Messina, Palermo, Leghorn,** and **Venice. Genoa** (234) and **Venice** (151) were great ports in the Middle Ages, before the discovery of a water route by the Cape of Good Hope to the East Indies and the discovery of America at the end of the fifteenth century. They then declined, but have revived in recent years and now—

Genoa has a large **import** trade, while **Venice** has the chief **export** trade.

Naples (563), the largest city in Italy, has a great import of **wheat** for conversion into **maccaroni,** the staple food of the people, and of manufactured goods

Messina (149) and **Palermo** (310) export wine and fruit. **Leghorn** is the port for Florence and Pisa.

TOWNS.—1. Of the Northern Plain.

Milan (491), the largest city in North Italy, has manufactures of silk and cutlery, and has great trade. It is famous for its beautiful marble cathedral.

Turin (335), on the Po, was once the capital of Italy, and now has silk and woollen manufactures. Great trade through the Mont Cenis Tunnel is carried on from Turin.

Genoa (234) is beautifully situated overlooking the Gulf of Genoa, and has many splendid palaces and churches. It is famous as the birthplace of Columbus. In the Middle Ages, Genoa was the chief seat of the manufacture of velvet, and the manufacture is still carried on there. It is also an important port.

Venice (151), built upon a number of small islands on the shore of the Adriatic Sea, is remarkable for its beauty and famous in history. In the Middle Ages, Venice was a powerful Republic, and also the chief centre of trade with the East. Like Genoa, it gradually decayed as British, Dutch,

and Spanish commerce grew, but still continued to be the seat of art and of luxury. In recent times prosperity has to some extent returned to Venice owing to the opening of the Suez Canal.

2. Of the Peninsula.

The largest city is **Naples**, but the most celebrated is **Rome** (463), on the Tiber. This city was founded about 2,700 years ago, and was for many centuries the capital of the Roman Empire. It afterwards, under the Popes, became the centre of Christianity, and exerted great influence upon European history. In 1870 Rome became the capital of the kingdom of Italy, and the Pope was deprived of temporal power. The city abounds with beautiful buildings, both ancient and modern, the chief of the latter being the cathedral of St. Peter. The numerous churches and galleries are adorned by priceless paintings, statues, and other works of art.

Naples (563) is beautifully situated upon the Bay of Naples, and is a very important trading and manufacturing city. Unlike most Italian cities, Naples is relatively modern, and has few historical associations. It was the capital of the kingdom of Naples till 1860, when it was added to the kingdom of Italy.

Florence (205), on the Arno, was an independent republic with considerable territories in the fifteenth and sixteenth centuries, and was then a centre of art and letters. It now has manufactures of mosaics, jewellery, and silks.

Pisa, near the mouth of the Arno, was once a powerful republic, but is now chiefly known for its leaning tower. **Herculaneum** and **Pompeii** were overwhelmed by an eruption of Vesuvius in 79 A.D., and have been partially unearthed in recent times. **Brindisi** is important as the point of departure for mails and passengers to the East through the Suez Canal.

Sicily and **Sardinia** are each between 9,000 and 10,000 sq. miles in extent, the former being somewhat the larger. Sicily has a very fertile soil, and a dense population (355 to a square mile), while Sardinia has much unproductive soil and less than one-fourth the density of population. Sicily has three large towns—**Palermo** (310), **Catania**, and **Messina**—all of which are seaports, with exports of wine, fruit, and sulphur. The chief town in Sardinia is **Cagliari**.

POPULATION.—About 32½ millions, or 293 to a square mile.

This is a great density, especially as a large part of the surface is mountainous.

THE PEOPLE.—The **Italians** are a mixture of many races. In very early times, before the arrival of the Aryans, the country was inhabited by numerous tribes of people, with whom many races of Aryan extraction mingled—viz. **Latins, Greeks, Celts,** and **Teutons.**

GOVERNMENT.—A **Limited Monarchy**, with two Houses of Parliament. The Lower House only is elected.

FOREIGN POSSESSIONS.—The Colony of **Eritrea** on the African Coast of the Red Sea has an area of about 88,000 sq. miles. Its capital is **Massaua**. Italy also has a protectorate on the coast of Somaliland.

MALTA and the adjoining islands of **Gozo** and **Comino** are situated in the Mediterranean Sea between Sicily and Africa. Total area, 119 sq. miles; population 183,000, or over 1,500 to the square mile. These islands belong to Great Britain.

Valetta (26), the capital, a strongly fortified city, has one of the finest harbours in the world, and being half-way between Gibraltar and Port Said is a most important port of call for vessels.

Malta is the headquarters and repairing station of the British fleet in the Mediterranean.

People. Mostly of Semitic origin, speaking a peculiar language allied to Arabic and ancient Carthaginian; the upper classes mostly speak Italian.

Industry.—Many of the population are employed in connection with the shipping; about 5,000 in Gozo make **Maltese lace.** The islands are very highly cultivated, and produce corn, cotton, early potatoes, oranges, grapes, and melons.

Citta Vecchia (7) (Old City), the former capital, is the only other town of importance.

Government.—The Governor, who is appointed by the Crown, is assisted by an Executive and a Legislative Council, the latter of which consists partly of elected members.

Climate.—Hot summers and mild winters.

EXAMINATION PAPERS

A. 1. Name the mountain ranges within and on the borders of Italy, indicating their direction, and naming the most prominent peaks.

2. Describe a coasting voyage from Venice to Genoa, mentioning the chief capes, openings, islands, and straits.

3. Name the chief vegetable products of Italy, as far as possible in order of importance, and give reasons for their cultivation in certain parts.

4. Name six Italian seaports; indicate their position; give some particulars concerning their trade.

B. 1. Draw a map of Italy, inserting the main physical features.
2. Name the islands on or near the Italian coast and describe Sicily, stating its physical features, productions, and chief towns.
3. What minerals do you connect with Elba, Carrara, and Sicily? and mention any other minerals worked in Italy.
4. Say what you can of Rome, Venice, Naples, Genoa, Milan, Turin, Palermo, Brindisi, and Florence.

C. 1. Compare Italy with India in as many respects as you can.
2. Name some manufacturing industries carried on in Italy, and mention some towns connected with them.
3. Where is Malta? What is its value as a British possession?
4. Delhi has been called the 'Rome of Asia.' Why?

ROUMANIA

Roumania is one of the Balkan States, but being north of the Danube it does not belong, geographically, to the peninsula. It is a fertile, well-watered country, almost as large as Nepal, lying between the lower course of the Danube and the Carpathian Mountain system. The kingdom is made up of the provinces **of Wallachia** and **Moldavia,** and includes also all the **Delta of the Danube.**

The majority of the people are engaged in **agriculture,** the chief crops being **maize** and **wheat. Plums** are also largely grown and exported. **Mining** is becoming more and more important, the country being very rich in minerals. **Coal** is dug, and **petroleum** is of great commercial importance, as it can be put on the market more cheaply than the Baku oil. The amount of oil raised in 1903 was double that of 1899.

The capital and largest town is **Bukarest,** which has about 232,000 inhabitants. The chief ports are **Galatz** and **Braila,** upon the Danube.

The government is a limited monarchy.

BALKAN PENINSULA

GENERAL DESCRIPTION.—This is the most eastern of the three great peninsulas of Southern Europe, and, like the **Italian** and **Iberian** Peninsulas, has an elevated surface. This peninsula comprises a number of states, which were once parts of the

Turkish Empire, but most of which are now either entirely or partly independent. The inhabitants are of many races and religions, and often bitterly hostile to one another. The population is scanty, and the many natural resources of the country are but slightly developed. In consequence of its elevation, the Peninsula resembles Spain in having very cold winters; but the rainfall is generally sufficient and the soil is fertile. It is a land of rapid streams, which are of very little service in commerce. Greece, the southern portion, though very small, has played a great part in the history of civilisation.

STATES.—1. **European Turkey**; **area** about **66,000 sq. miles.**

2. The kingdom of **Greece**; **area** about **25,000 sq. miles.**

3. The kingdom of **Servia**; **area** about **18,500 sq. miles.**

4. The principality of **Bulgaria** with **Eastern Roumelia**; **area** about **38,000 sq. miles.**

5. The principality of **Montenegro**; **area** about **3,500 sq. miles.**

Bosnia and **Herzegovina**, which are now under the protection of Austria-Hungary, also belong geographically to the Peninsula.

BOUNDARIES. The boundaries are, with the exception of a short distance in the north-west (Bosnia and Herzegovina), natural—the **Danube** on the north and the **sea** on all other sides.

COAST-LINE. Except in the Black Sea, the coast is remarkably broken by deep openings, especially in Greece and the coast of Turkey between Greece and the Dardanelles. The **Adriatic** and **Ionian Seas** wash the west coast, and the **Ægean Sea, Sea of Marmora**, and **Black Sea** are on the east. The straits connecting these seas, the **Dardanelles** and the **Bosporus**, are politically important as affording the only highway for Russia to the open sea on the south.

The chief openings are the **Gulf of Salonica** in Turkey, and the **Gulfs of Corinth** and **Ægina**, which almost cut Greece into two parts, the **Isthmus of Corinth** connecting the peninsula of **Morea** with the mainland.

The Peninsula has many islands. On the west are the **Ionian Islands**, with **Corfu** and **Zante**, the best known, and on the east the **Archipelago**, of which the largest is **Negropont**, a long island near the mainland.

Candia, to the south of the Archipelago, is 160 miles long and over 3,300 sq. miles in area. It is mountainous, the chief mountain being **Mount Ida.**

RELIEF.—The surface of the Balkan Peninsula is almost wholly occupied by plateaux, from which rivers flow in many directions. Upon the plateaux are numerous scattered groups of mountains and mountain ranges.

The **Balkan Mountains** form the chief range, rising from the Danube Valley on the north, and descending to that of the Maritza on the south. This range, though not of very great height—its highest point being 8,000 ft.—is remarkable for steepness and for the height of its passes.

From the Balkans a lower range, the **Rhodope Mountains**, run to the south-east, and the **Pindus Mountains** south into Greece. **Mt. Olympus**, near the Grecian border, and **Mt. Parnassus**, north of the Gulf of Corinth, are lofty and well-known peaks.

Lowlands.—The only plains are in the east—the **Bulgarian Plain**, south of the Danube, and the **Valley of the Maritza.**

RIVERS.—The **Danube.** This river, which forms the northern boundary of the Balkan Peninsula, flows through an extensive plain, and receives the drainage of the Balkans and of the Transylvanian Alps. The lower course of the Danube is a great navigable stream, with many lakes and swamps on the left bank, and when near the sea the stream divides into many channels.

Numerous rapid rivers flow from the high lands to the coasts, but they are of very little service in commerce. The chief are the **Maritza** and **Vardar.**

CLIMATE AND RAINFALL.—The summers are hot, except in the more elevated parts, and the winters are very cold, especially compared with parts of Italy in the same latitude. The winter climate of Greece resembles that of Spain in its dryness and severity. Turkey and Bulgaria, in the mountainous regions, have much snow. The rainfall is generally sufficient for agriculture.

FERTILITY OF SOIL.—The river valleys are very fertile throughout the Balkan Peninsula. In Turkey and Bulgaria the uplands are largely covered with forests, which are now being rapidly cut down. The uplands of Greece resemble those of Spain in being dry and barren. Modes of cultivation are generally very rude.

PRODUCTS.—1. **Agricultural.**—These are not nearly so important as they might be with better methods of cultivation. The most general crops are **maize** and other **cereals, tobacco, cotton**, and **fruits.** The **vine** is largely grown and much **wine** is exported. **Currants, figs,** and **olives** are exported from Greece, and **plums** from Servia. **Roses** are grown in Roumelia for the manufacture of **attar** of roses, and Turkey produces **coffee, madder, opium,** and **gums.**

2. **Animal.**—The common domestic animals are the chief. **Asses** and **mules** are used for transport over the hilly roads of Greece.

Silk is obtained in Turkey, Greece, and Bulgaria.

Fisheries.—**Sponges** are an important product of the Mediterranean. The Bosporus and Sea of Marmora have valuable fisheries of food fishes.

3. **Mineral.** **Turkey**: **Coal** abounds, but very little is obtained. **Copper, lead, silver,** and **iron** are also plentiful, but mining industries are not actively worked in Turkey. **Greece**: **Lead ore** is abundant and actively worked. **Iron ore** also exists, but is undeveloped. **Silver, statuary marble,** and **zinc** are also found in considerable quantities.

Servia: Minerals are abundant, but are little worked.

Bulgaria produces **coal, iron,** and **salt.**

MANUFACTURES.—The manufacturing industries of all the Balkan countries are chiefly domestic and on a small scale. **Carpets, muslins, copper and brass utensils** are the chief.

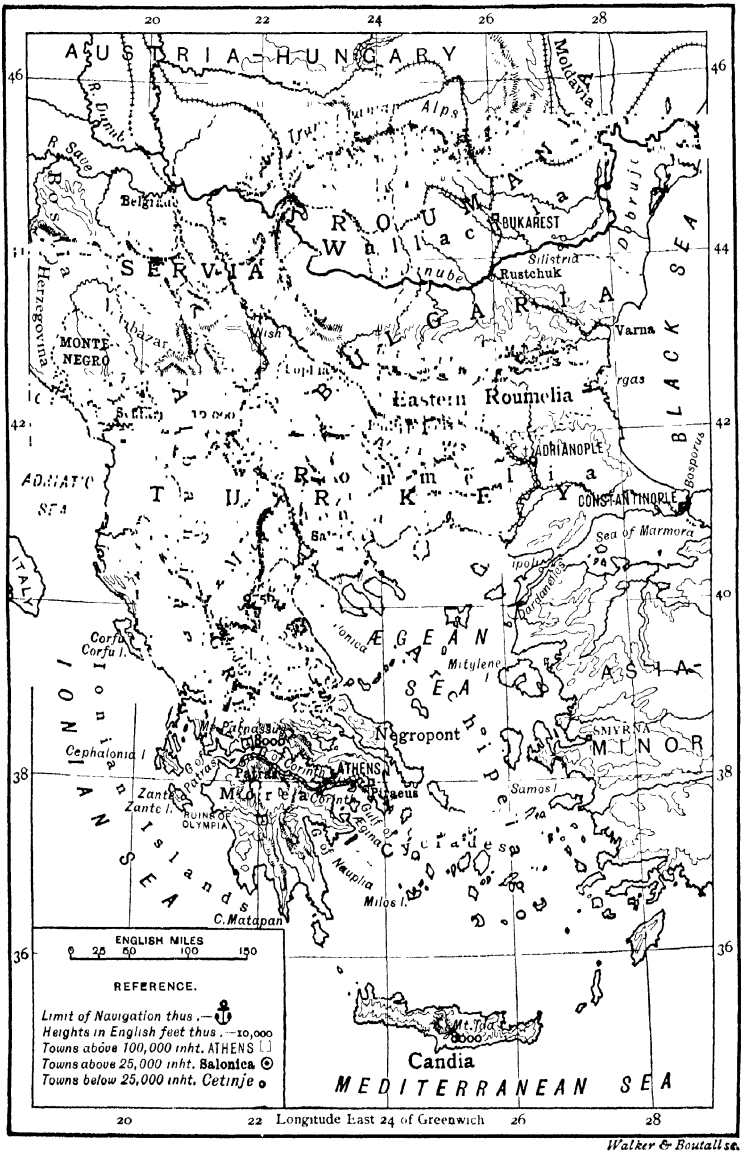
TRADE.—The carriage of merchandise is generally difficult in this peninsula owing to the lack of navigable rivers, canals, and good roads. The railway system is now being developed under difficulties, owing to the height of the plateaux and of the passes. The **internal** trade is consequently small. The seaports carry on an active **external** trade, the imports much exceeding the exports. The Greeks possess a great part of the commerce of the Levant and Black Sea.

RAILWAYS.—The two main railway lines in Turkey are:—

(*a*) From Belgrade through Nish to Salonica.
(*b*) From Nish to Constantinople.

In the construction of these lines the valleys of the **Morava, Vardar,** and **Maritza** have been followed.

FIG. 104.—THE BALKAN PENINSULA: PHYSICAL AND POLITICAL.



Walker & Boutall sc.

Longmans & Co London & New York.

CANAL.—The Ship Canal between the Gulfs of Corinth and Ægina is the only one of importance.

IMPORTS.—The manufactures of the Peninsula are unimportant, and hence the imports are **manufactured goods,** chiefly **cotton goods.** Others are **woollen goods, machinery** and **metals,** and **tropical produce.**

EXPORTS.—These are the agricultural products. From Turkey are exported **silk, wheat, raisins,** and **tobacco**; from Greece, **currants** and other **fruits, sponges,** and **olive oil**; from Servia, **wine** and **plums**; and from Bulgaria, **wheat.**

The chief **seaports** are **Constantinople, Salonica,** and **Patras.**

Constantinople has great trade, being the centre of commerce in the Turkish Empire. Much of the produce of Asiatic Turkey passes through this port.

Salonica has grown greatly in importance since the construction of the railway to Nish and Belgrade, and is now on the shortest route to Egypt from Northern and Western Europe.

Patras is the chief port for the export of currants.

STATES AND TOWNS.—THE TURKISH EMPIRE.—This empire embraces **European Turkey,** 66,000 sq. miles, together with very extensive territories in **Asia** and **Africa.** The **Asiatic** provinces are **Asia Minor, Mesopotamia, Syria,** and **Arabia,** with a total area of nearly 700,000 sq. miles.

The **African** provinces are **Tripoli** and **Benghazi,** with an area of nearly 400,000 sq. miles.

In addition, the following states are nominally part of the Turkish dominions:—Bulgaria, Bosnia, Herzegovina, Novibazar, Egypt, and Samos (a tributary principality), but the Sultan has very slight authority over these states.

EUROPEAN TURKEY consists of **Roumelia** and **Albania,** which extend from the Black Sea to the Adriatic, and are composed almost entirely of tablelands and mountainous country.

The **population** is over 6 millions, or 92 to a square mile, and consists of Turks, Greeks, and Albanians in almost equal numbers, together with representatives of many other races, as Slavs, Magyars, Jews, and Armenians.

Constantinople (1,125) is the capital and largest city of the whole Turkish Empire. It is excellently situated for commerce upon the Bosporus, and presents a very beautiful spectacle when seen from the water; but it is badly lit and drained, and many of the streets are very narrow and dirty.

For many centuries previous to its capture by the Turks in 1453 this city was the capital of the Eastern Roman Empire, which existed for about a thousand years after the downfall of the Western Roman Empire.

Adrianople, **Salonica**, and **Gallipoli** are all important trading towns, and the last named is the chief port for the Turkish navy, and commands the passage of the Dardanelles.

GREECE, or the kingdom of the Hellenes, consists of the indented peninsula of **Morea, Northern Greece**, the **Islands**, and **Thessaly**, with a total area of 25,000 sq. miles. The population is 2½ millions, or 97 to a square mile, and the Greek people are of mixed **Hellenic** and **Albanian** race.

The surface of Greece is very mountainous and largely barren. Therefore the Greeks have long been compelled to seek a living in maritime and commercial pursuits, and are now noted as seamen and merchants.

Athens (111), the capital, is the largest city, and is one of the most famous historical cities in the world. Twenty-five centuries ago this city was the home of a number of sculptors, poets, architects, dramatists, &c., whose names have become immortal, and much of whose work still remains as models of perfection. Athens has many beautiful and interesting ruins, the chief being upon the rocky hill called the Acropolis.

Piraeus is the port of Athens. **Patras** has the chief export of currants. **Corinth** and **Olympia** are now decayed, but were important places in the days of ancient Greek glory.

SERVIA is a mountainous and fertile country to the west of Bulgaria, with an area of 18,660 sq. miles and a population of 2½ millions, or about the same as Greece, but there are 134 to a square mile, as compared with 97 in Greece.

The people are mainly **Slavs**, with a good many **Roumanians**, **Gypsies**, and **Germans**. The country is rich in minerals, but almost the sole occupation of the people is **agriculture**. Servia became quite independent of Turkey in 1878 by the Treaty of Berlin.

Belgrade (69), the capital, is a fortified town at the confluence of the Save and Danube.

BULGARIA and **EASTERN ROUMELIA** form a state nearly 38,000 sq. miles in area. The northern boundary is the **Danube**, the southern is the **Rhodope** Range, and the eastern is the **Black Sea**. This country is in name subject to the Sultan of Turkey, but has been practically an independent State since 1878. The

soil is productive, and the people are mostly engaged in pastoral and agricultural pursuits. The population is about 3¾ millions, or 100 to a square mile, and consists chiefly of **Bulgars** (Slavs), together with Turks, Greeks, Jews, &c.

Sophia (67) is the capital, but **Philippopolis** (43) is the largest town. **Rustchuk** and **Silistria** are towns of some importance upon the right bank of the Danube. **Varna**, upon the Black Sea, is the chief port.

MONTENEGRO is a mountainous country in the west of the Peninsula, with an area of about 3,600 sq. miles and a population of 230,000. The Montenegrins have always defied the power of the Sultan, and have kept their independence. The soil is not very fertile, and is badly tilled. The people keep cattle and sheep, and grow some maize, oats, potatoes, and vines.

The capital is **Cetinje**.

RELIGION.—**Muhammadanism** is the religion of the Turks. The **Greek Church** form of Christianity is the religion of Greece and of most of the Slavs. **Roman Catholicism** is professed in **Servia** and **Bosnia**, and there are many **Jews** and **Armenians**.

GOVERNMENT.—In **Turkey**, **Absolute Monarchy**. In **Greece** and **Servia**, **Limited Monarchies**, with one House of Parliament in Greece and two in Servia. **Bulgaria** is a principality with one House, called the National Assembly.

Montenegro is ruled by a Prince, who is practically absolute, though there is a Council.

Samos, an island of 180 sq. miles and population of 48,000, lying off the coast of Asia Minor, forms a principality paying tribute to Turkey. The soil produces wine and olive oil, which, with hides, form the chief exports.

EXAMINATION PAPERS

A. 1. Describe a coasting voyage from the Gulf of Salonica to the Gulf of Arta, naming seas, openings, islands lying near the mainland and seaports.

2. Name the general vegetable products of the Balkan States, and those, in addition, peculiar to Greece.

3. Name the Balkan States with their capitals, and say what form of government each has.

4. What political importance attaches to the position of Constantinople?

B. 1. Give some account of the lower course of the Danube, with a sketch-map.

2. Give some account of the minerals which exist in the Balkan Peninsula, and specify those which are worked to any considerable extent.

3. State the extent, position, and products of Servia, Greece, and Bulgaria.
4. Name all the provinces which are included in the dominions of the Sultan of Turkey.

C. 1. Describe the climate of Greece and Bulgaria, comparing each with the other and with Spain.
2. Name the chief exports of Turkey and Greece.
3. Name the races of people inhabiting Turkey, Greece, Bulgaria, and Servia, indicating those who form the majority in each state.
4. Name the mountain ranges of the Balkan Peninsula, and give some idea of their height.

AFRICA

GENERAL DESCRIPTION.—Africa is the south-western portion of the great land mass of the Eastern Hemisphere. It is divided from Europe by the Mediterranean Sea, but the north of Africa is geographically similar in many respects to the south of Europe, and the Red Sea, which separates Africa from Asia, is only like a long narrow lake stretching across a continuous desert.

Africa extends for about an equal distance north and south of the Equator, and it may therefore be called the **Tropical Continent.** Its **area** is about 11½ million sq. miles, or two-thirds as large as Asia, and three times as large as Europe; the **population** is vaguely estimated at 200 millions. The most thickly peopled part of the continent is the Sudan. The deficient rainfall causes the vast tracts of the Sahara in the north and the Kalahari in the south to be almost uninhabited.

Until recent years the interior of the continent was a comparatively unknown land, but the discoveries of **Livingstone** on the Zambesi and the southern lake district, of **Burton**, **Speke**, and **Baker** around the head-waters of the Nile, of **Cameron** and **Stanley** in the Congo Basin, and of many other intrepid explorers, have made known to us the courses of the great rivers of Central Africa.

This lack of geographical information which so long prevailed with regard to Africa was largely due to the following causes:—

1. The Sahara, an almost impassable barrier, shut off the centre from communication with the Mediterranean States.

2. The unbroken character of the coast prevented foreigners from penetrating beyond the fringe.

3. All the great rivers have their courses impeded by rapids and cataracts, thus preventing direct communication by sea.

4. The hot and unhealthy climate of the coast districts in many parts prevented European settlements.

5. The barbarous condition of the inhabitants.

For some time past the continent has been undergoing the process of partition among various European States. The term '**Sphere of Influence**' has come to be used for a portion of territory under the control of a particular Power. In this way **England** possesses vast tracts extending from Cape Colony nearly to the Equator, considerable districts in Eastern Africa, Senegambia, and Guinea, with great influence in Egypt. **France** possesses Algeria, Senegal, a district north of the Congo, and exercises a protectorate over Tunis and Madagascar. **Portugal** holds the coast from the Congo to Cape Frio on the west, and from Delagoa Bay to Cape Delgado on the east. **Germany** has annexed the district from Cape Frio to the Orange River on the west, a large district from Cape Delgado northwards on the east, and several settlements on the Gulf of Guinea. **Italy** has the coast district from near Sawakin, on the Red Sea, southwards to the neighbourhood of the Equator. The King of the **Belgians** is at the head of the Congo Free State, and **Turkey** rules over Tripoli. Only Morocco, Abyssinia, and Liberia are **independent.**

BOUNDARIES AND COAST-LINE.—Africa is practically surrounded by water, a fact which has also tended to its isolation. The **Atlantic Ocean** washes the western shores, the **Mediterranean Sea** separates Africa from Europe, and on the east are the **Indian Ocean** and the **Red Sea.**

The coast-line is remarkable for its unbroken character, in this respect resembling Australia and South America. This regularity of outline has had important results on the political development of the continent, and also on the climate; it is at present a bar to commercial growth.

The coast has only two large bends: one in the north, forming the **Gulfs of Cabes** and **Sidra**, and one in the west, forming the **Gulf of Guinea.** The **Mozambique Channel** separates Madagascar from the mainland.

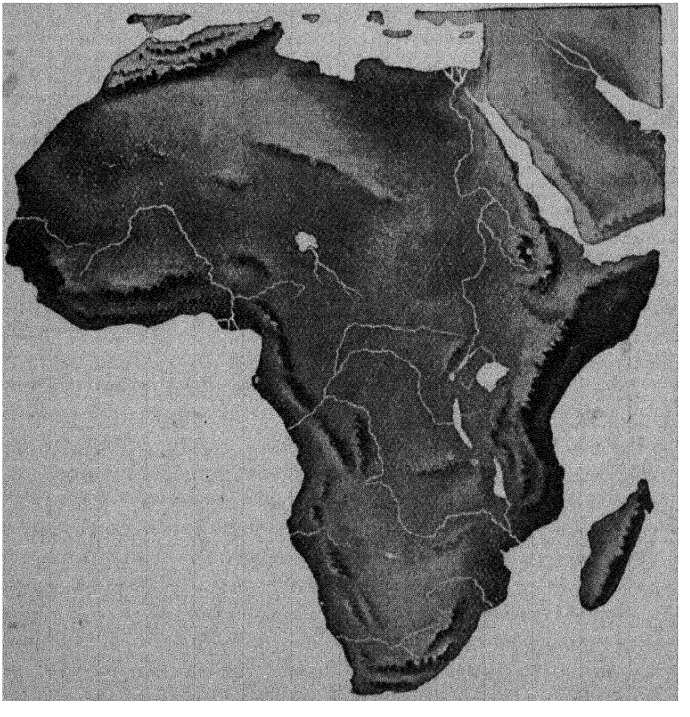
CAPES.—The principal capes are **Cape Blanco**, in Tunis, the most northerly point; **Cape Verde**, the most westerly point; **Cape Palmas**, in Guinea; **Cape Lopez**, just south of the Equator; the **Cape of Good Hope**; **Cape Agulhas**, the most southerly point; and **Cape Gardafui**, the most easterly point.

ISLANDS.—Africa has but few islands. **Madagascar** is the only large island. North and east of Madagascar lie the **Comoro Islands**, the **Seychelles**, **Bourbon**, and **Mauritius.** **Socotra** lies east of Cape Gardafui. Four groups lie off the north-west coast—

the **Azores, Madeira Islands, Canary Islands**, and **Cape Verde Islands.** In the Gulf of Guinea is the mountainous island of **Fernando Po.** Far away from land in the Atlantic are the rocky islands of **St. Helena** and **Ascension.**

RELIEF.—In physical structure Africa most resembles Australia, the greater part of the surface consisting of **plateaux,**

FIG. 105.—AFRICA: RELIEF



comparatively uniform in elevation, but gradually rising towards the Equator. These plateaux are bounded by mountains, leaving a **narrow strip** of **lowland** near the coast.

The average elevation of the southern half of the continent is about 4,000 ft., but towards the eastern side a **depression** occurs, running north and south, and in this depression the great African

lakes are found. **Deserts** occupy about one-third of the surface of Africa. The **Sahara** in the north, with an area of 2,500,000 sq. miles, nearly half as large again as the Indian Empire, extends from the Atlantic Ocean to the Red Sea, while the **Kalahari**, in the south-west, extends northwards from the Orange River for 1,000 miles.

MOUNTAINS.—Africa has three great mountain systems—the **East Coast Range**, the **West Coast Range**, and the **Atlas System.**

1. **The East Coast Range**—In Southern Africa the land rises from the coast in three terraces, each bordered by mountains; the third and highest, the **Nieuwveld**, is the true mountain range, and is continued northwards as the **Drakenberg**, 10,000 ft. As the range approaches the Equator, **Mount Kilimanjaro**, 20,000 ft., and **Mount Kenia**, the two highest mountains in Africa, tower snow-capped above the neighbouring peaks. Further north the **Mountains of Abyssinia** rise to a height of 15,000 ft. The range now follows the Red Sea coast to the neighbourhood of Cairo.

2. The **West Coast Range** also commences in South Africa and follows the Atlantic coast to the river Senegal. The **Cameroon Mountains**, near the Gulf of Guinea, attain an elevation of 13,000 ft. The **Kong Mountains**, further north, do not exceed 3,000 ft. in elevation.

3. The **Atlas Mountains**, in Morocco, rise to a height of 11,000 ft. In Algeria the range divides into the **Little Atlas**, near the coast, and the **Great Atlas**, further south.

DRAINAGE.—Most of the rivers of Africa are remarkable for the unnavigability of their courses from the sea. This is due to the configuration of the surface of the continent. The rivers rise on the plateau, and for a considerable distance their currents are steady and suitable for inland navigation; but on reaching the edge of the plateau they descend to the plain in rapids or cataracts, and render traffic for any distance from their mouths impossible.

1. The **tropical belt** is drained by four large rivers—the **Nile, Niger, Congo**, and **Zambesi**—and several of smaller magnitude, the chief of which are the **Senegal, Gambia, Ogowe**, and **Kwanza** on the west, and the **Limpopo, Rovuma**, and **Juba** on the east.

The **Nile** rises south of the Equator, and drains **Lakes Victoria** and **Albert Nyanza**, together with several of smaller size. Its chief **tributaries** are the **Bahr-el-Ghazal**, on the left, and the **Bahr-el-Azrek** and **Atbara**, from the Abyssinian Plateau. For the last 1,400 miles of its course it does not receive a single tributary, and finally enters the Mediterranean by an extensive delta. Its length is estimated at 4,000 miles.

The **Niger** rises in the Kong Mountains, drains the Western Sudan, and after making a great curve northwards enters the Gulf of Guinea, forming a large delta at its mouth. Its chief **tributary** is the **Benue**, on the left.

The **Congo**, although not the longest, is by far the greatest river of Africa. It rises to the west of Lake Nyassa, drains **Lakes Bangweolo** and **Moero**, and also receives the overflow from **Lake Tanganyika**. From **Stanley Falls**, near the Equator, it is a broad, deep, navigable stream for 1,000 miles, until it passes through the East Coast Range; here its navigation is interrupted by rapids. It enters the Atlantic after a course of 3,000 miles by a deep wide mouth. Like the Niger and several other African rivers, it makes a big curve towards the north.

The **Zambesi** drains the country to the south-east of the Congo basin, and enters the Indian Ocean through a vast delta. The **Victoria Falls**, in its southern bend, is one of the grandest cataracts in the world. Its **tributary**, the **Shire**, drains **Lake Nyassa**.

2. The only large river draining into the ocean, either to the north or south of the tropical belt, is the **Orange River** of Cape Colony.

3. **Lake Chad**, situated to the south of the Sahara, and **Lake Ngami**, on the border of the Kalahari Desert, are centres of **inland drainage**. Both lakes are fresh and decrease very greatly in size during the dry season.

CLIMATE AND RAINFALL.—The climate is generally **hot**, the average yearly temperature of the greater part of the continent being 80°. There is, however, much **greater uniformity** than in the case of the other continents. The difference between the summer and winter temperature in most districts is not more than 20°, while near the Equator it does not exceed 5°.

The seasons are determined by the **rainfall, wet seasons** and **dry seasons** recurring with great regularity.

The continent may be divided into five districts, according to the rainfall:—

1. **The Tropical Belt.**—Here the rainy season follows the course of the sun; thus, when the sun shines vertically north of the Equator it is the rainy season for the Sudan, while the Zambesi Valley has its rainy season when the sun's rays are vertical south of the Equator.

This is due to the fact that the land heated by the sun causes an indraught from the sea. The **south-east trade-winds** from the Indian Ocean discharge their moisture on the mountains of Eastern and Central Africa, while the Guinea Coast is drenched with rain brought by the winds blowing from the Gulf of Guinea.

2. The **Sahara**, where little or no rain falls.

The winds from the Indian Ocean and the Gulf of Guinea part with their moisture before reaching this district, while the **north-east trade-winds**, which prevail in these latitudes, are land winds, and consequently dry.

3. The **Kalahari district**, in the south-west.

The mountains of the east coast deprive the south-east winds of their rain before they reach this district.

4. **The Atlas region**, in the north, has rain during our winter, when the midday sun is overhead south of the Equator.

5. The **South-west of Cape Colony** has rain during our summer, when the midday sun is overhead north of the Equator.

VEGETATION.—In no continent can the relation between climate and vegetation be more closely traced than in Africa, the continent being divided into broad belts with characteristic species.

1. **The Equatorial Forest Belt.**—The characteristic trees of this belt are the giant **baobab**, **ebony**, **camphor**, **gum**, and many hard and ornamental woods. The **rubber tree** has given rise to a thriving industry.

2. **Savanna Belts.**—Proceeding outwards from the Equator, dense forests give place to rolling plains with good timber trees, along the courses of the rivers.

3. **Steppe-like Belts**—These lie between the savannas and the deserts. The thorny **acacia** is the most characteristic tree, and **tropical plants** flourish wherever cultivated. The **bamboo** is found in this belt.

4. **Desert Belts.**—These lie on the tropical belts of calms, which partly accounts for their desert nature (see also page 182). Stunted **acacias** find a precarious existence, and groves of **palms** occur on the oases.

5. **The Temperate Belts.**—Along the north of the continent the vegetation is similar to that of Southern Europe; in the South Temperate Belt the vegetation is characterised by brilliant flowering plants and the comparative absence of trees.

Except in the desert areas, vegetation in Africa is remarkably luxuriant. The natives find food without much cultivation, and this accounts to some extent for their want of civilisation. The chief food-plants are **cassava**, **yam**, **ground-nut**, **banana**, **tamarind**, **coco-nut**, **pineapple**, and among cultivated plants are **millet**, **maize**, **cotton**, and **sugar-cane**.

ANIMALS.—The grassy plains of Southern Africa feed vast herds of **antelopes**, **zebras**, **quaggas**, &c., which are preyed upon by **lions**, **leopards**, **hyænas**, &c. Where trees occur the tall **giraffe** is seen, while the **elephant** and **rhinoceros** are found in the woody and marshy districts. The **hippopotamus** and the **crocodile** abound in the great rivers and lakes; the **gorilla** and **chimpanzee** inhabit the forests of the Lower Guinea Coast, and **monkeys** and fierce **baboons** are numerous, the latter chiefly round the Gulf of Guinea. The **ostrich** abounds in the desert districts of the north and south. **Locusts** and **white ants** are the insects most destructive to vegetation, and the tse-tse fly is fatal to horses and cattle. The **python** is the largest of numerous varieties of snakes.

Of domestic animals the **camel** is used as a beast of burden in the north,

and the **horse** and **ox** in the south. **Sheep** are reared in large numbers in South Africa.

The commercial value of the various animal products of Africa has long been known, the chief being **ivory, ostrich feathers,** and **wool.**

MINERALS.—The most important minerals in Africa are **gold, diamonds, salt,** and **copper. Silver, iron,** and **lead** are also widely diffused.

Gold is found in Central and Southern Africa and on the east and west coasts. The goldfields of the **Transvaal** now produce annually more than those of Australia.

Diamonds are obtained from the **Kimberley** Mine, in Cape Colony, in greater abundance than from all the other diamond-producing districts of the world combined.

Salt is found in great quantities in the deserts of the north and south.

Copper is abundantly found in Central and Southern Africa. **Ookiep,** in Cape Colony, and the **Katanga** district, to the west of Lake Tanganyika, produce great quantities.

COMMERCE.—Some of the obstacles in the way of commercial development in Africa have already been referred to. Another obstacle is the want of facility in transport. Direct communication with the sea from the interior by means of the rivers is difficult or impossible, and roads and railways are at present only in process of construction.

In the north the **camel** is used for transport, but in many parts of the continent the presence of the tse-tse fly renders the use of animals impossible, and **human porters** have to be employed. Railway communication between north and south will be established on the completion of the **Cape-to-Cairo Railway.** This is being laid in the Nile Valley in the north, and has already reached the Sudan, and along the great depression from Cape Town in the south.

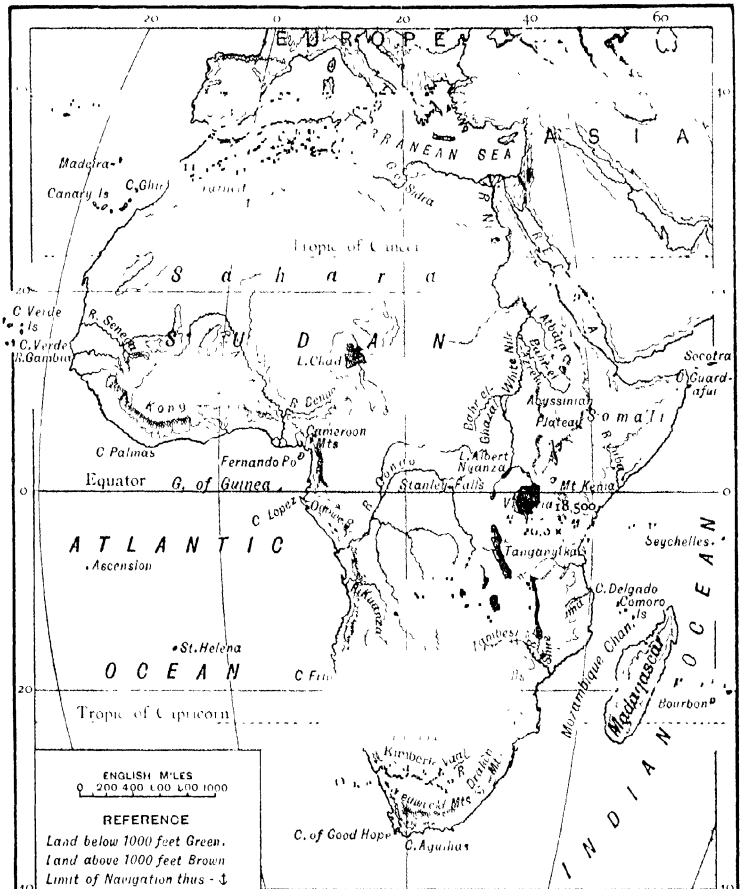
European nations are now making much progress in developing the continent in their respective spheres of influence. Agriculture and mining are being improved, and trade is making rapid advance.

PEOPLE.—Africa is inhabited by two races—the **Caucasic** and the **Negro.**

1. The Caucasic stock inhabits the north and north-eastern parts of the continent, and came originally from Asia. There are two great branches—the **Semitic,** inhabiting the northern coast districts, of whom the **Arabs** are the chief type; and the **Hamitic,** chiefly inhabiting the Sahara and the north-east, of whom the **Berbers, Egyptians,** and **Somali** are representative types. Southern Africa is settled by **Europeans,** chiefly **British** and

Dutch. **Arabs** are widely distributed as traders in Eastern and Central Africa.

FIG. 106.—AFRICA: PHYSICAL.



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2. South of the Sahara the people belong to the **Negro** stock. They may be divided into three branches—the true **Negroes** of the Sudan, the **Bantus** of the centre and south, and the

Hottentots of the south-west. The laziness of the negro has rendered it necessary to import labourers, and there are consequently many **Indians** in Central and South Africa, and **Chinese** on the gold mines of the Transvaal.

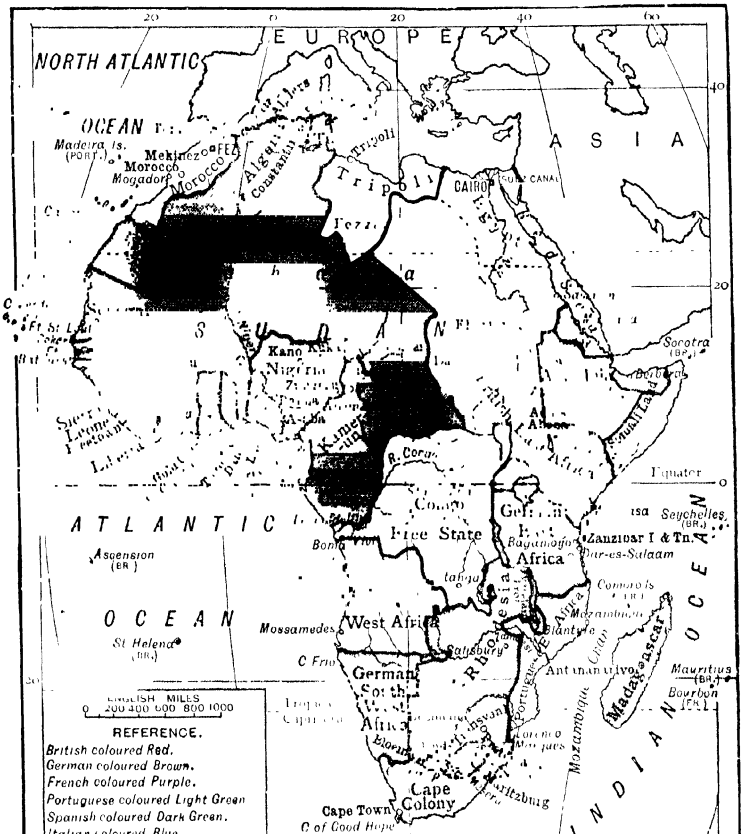
The Caucasic people of the north, and some of the Sudan negroes are **Muhammadans.** The Europeans are **Christians,** and the rest of the people are **fetish-worshippers.**

THE COUNTRIES IN AFRICA, WITH THEIR CAPITALS

Country	*Capital*
Independent States (550,000 sq miles):	
Morocco	Fez
Abyssinia	Addis Abeba
Liberia	Monrovia
Under British Influence (3,277,000 sq. miles):	
Egypt (nominally under Turkey)	Cairo
Egyptian Sudan (,, ,, ,,)	Khartum
West African Settlements	Freetown, Lagos
Nigeria	Zungeru
British East Africa	Mombasa, Zanzibar
British Central Africa	Blantyre
British South Africa:	
Cape Colony	Cape Town
Natal	Pietermaritzburg
Orange River Colony	Bloemfontein
Transvaal Colony	Pretoria
Basutoland	Maseru
Bechuanaland Protectorate	Mafeking
Rhodesia	Salisbury
Under French Influence (3,640,000 sq. miles): [1]	
Algeria	Algiers
Tunis	Tunis
French West Africa and Sahara	Dakar
French Congo	Libreville
Madagascar	Antananarivo
Under German Influence (898,000 sq. miles):	
German West Africa (Kamerun)	Buea
German South-West Africa	Windhoek
German East Africa	Dar-es-Salaam
Under Portuguese Influence (794,000 sq. miles):	
Portuguese West Africa	S. Paulo de Loanda
Portuguese East Africa	Lorenço Marques
Under Belgian Influence (905,000 sq. miles):	
The Congo (Free) State	Boma

[1] Including a large area unoccupied (the Sahara Desert).

FIG. 107.—AFRICA: POLITICAL.



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Country	*Capital*
Under Turkish Influence (1,440,000 sq. miles): [1]	
Egypt	Cairo
Anglo-Egyptian Sudan	Khartum
Tripoli	Tripoli

[1] Including Egypt and Egyptian Sudan, administered by Great Britain.

Country	*Capital*
Under Italian Influence (230,000 sq. miles):	
Colonies on Red Sea	Massaua
Italian Somaliland	Itala
Under Spanish Influence (154,000 sq. miles):	
Spanish Sahara	Rio de Oro

EXAMINATION PAPERS

A. 1. Give the area of Africa, and say which parts are most thinly peopled.
2. Mention some of the most famous African explorers. What discoveries are associated with their names?
3. Give any reasons why the interior of Africa remained so long unknown.
4. What European nations have possessions in Africa? Say where they are situated

B. 1. Mention the chief mountain ranges of Africa and describe the East Coast Range.
2. Name the principal islands to the west of Africa.
3. Which are most prominent capes in Africa, and where are they situated?
4. Explain why there is so little difference in the summer and winter temperature of Tropical Africa.

C. 1. When does the rainy season occur in Cape Colony, Natal, Morocco, Senegambia, the Zambesi Valley?
2. Why is the Sahara district almost rainless?
3. Describe the Congo and Zambesi.
4. Describe the vegetation belts of Africa, and mention the characteristic productions of each.

D. 1. Account for the position of and give a short description of the African lakes.
2. Give the situation of the Kong Mountains, the Little Atlas, Mount Kenia, river Benin, Mauritius, Socotra, Victoria Falls, and the Blue Nile.
3. What districts are noted for gold, diamonds, palm oil, copper, and the date-palm?
4. Where do the following races live, and to what stock do they belong: Kaffirs, Berbers, Hottentots, Arabs, Somalis, Boers?

NORTHERN AFRICA

GENERAL DESCRIPTION.—Northern Africa includes the States bordering on the Mediterranean Sea, some of which—*e.g.* Egypt—have been the seats of civilisation from very early times.

The Sahara Desert forms the southern boundary of these States, and has prevented their civilisation from spreading southwards. The **inhabitants** belong mostly to the Caucasian type, and consist of two great divisions :—1. **Berbers** (whence the name Barbary States), who are mostly engaged in agriculture. 2. **Arabs**, who are settled and engaged in agriculture in Egypt, but who are largely nomadic and occupied with pastoral pursuits in the western States. **Muhammadanism** is the prevailing religion.

The estimated **area** and **population** of the four main divisions are as follows :—

1. **Morocco**,	220,000	sq. miles,	8,000,000	inhabitants.
2. **Algeria** and **Tunis**,	230,000	,,	6,000,000	,,
3. **Tripoli**,	400,000	,,	1,300,000	,,
4. **Egypt**,	400,000	,,	9,700,000	,,

MOROCCO

This is the most westerly of the Barbary States, and is under the rule of a sultan possessing absolute power.

The **surface** is very **mountainous**, rising in terraces to the range of the **High Atlas** (11,400 ft.), which extend throughout the country in a north-easterly direction from **Cape Ghir**, on the west coast.

The **climate** is warm and healthy. The mountains arrest the moisture brought by the north-west winds, which prevail from October to February, hence the country at the foot of the range on the western side is exceedingly fertile, while that on the eastern side is arid and barren.

PRODUCTS.—Minerals are widely distributed, but little worked. **Fruits** of all kinds and **grain** flourish. The **dates** of Tafilet are especially noted. The **camel** is the most useful animal and is the chief means of transport. The principal **exports** are **maize**, **wool**, **oil**, **leather** (from goat-skins), and **fez-caps**.

TOWNS.—There are three important inland towns:—**Fez** (140), the capital, noted for the manufacture of leather and the red fez-caps worn by Muhammadans; **Morocco**, in the south, and **Mekinez**. The chief **ports** are :—**Tangier**, on the Strait of Gibraltar, the first trading town of the country; **Mogador**, the port of Morocco; and **Rabat-Sallee**, the port for Fez and Mekinez.

Spain possesses Ceuta and one or two small ports on the Mediterranean.

ALGERIA AND TUNIS

Algeria has been a French province since 1830. The ruler (Bey) of Tunis has been under French protection since 1881.

RELIEF.—The surface of Algeria may be divided into three well-marked regions.

1. The fertile **lowland strip** near the coast, known as the **Tell.**

2. The **upland region,** which rises in terraces to the **Great Atlas Mountains,** an arid district, where **alfa-grass** (used in the paper manufacture) is the chief product.

3. The **desert** region, lying to the south of the mountains, where the only habitable spots are the **oases.**

In Tunis the most fertile region is the **valley** of the **river Mejerda.**

PRODUCTS, PEOPLE, &c.—Since the French occupation, the area under cultivation has largely increased, railways and roads have been constructed, artesian wells have been sunk, swamps drained, and large areas planted with trees (especially blue gums), causing the climate to be more healthy and the country more productive.

Berbers and **Arabs** make up most of the population, the former being chiefly settled and engaged in agriculture, while the latter are mainly nomadic. Numerous Jews are scattered throughout Northern Africa.

The chief **exports** are **wine, sheep, wool, alfa-grass, iron ore,** and **coral.**

TOWNS.—**Algiers** (75), the capital, has a fine situation on the shores of the Mediterranean. It is an important port, and is connected by railways with other towns of the colony. **Oran** and **Bona** are also important ports, and **Constantine,** a strong fortress, is the chief inland town.

Tunis (150), the capital of the protected State, manufactures silk and woollen goods, leather, and earthenware; **Goletta** is its port. **Kairwan,** further south, is one of the sacred cities of the Muhammadans.

TRIPOLI

This State is governed as a Turkish province, and includes the oases of Fezzan. The desert here reaches the Mediterranean, and the only fertile part is a narrow strip near the coast.

The **exports** are **alfa-grass, ostrich feathers,** and **sponges. Tripoli** is the only important town, and is the starting-point for the caravans crossing to the Sudan.

EGYPT

Although nominally a dependency of Turkey, Egypt has an independent government, which is at present under English control. The ruler is called the **Khedive.**

EXTENT, &c.—Egypt Proper extends from the Mediterranean up the Nile Valley to a line drawn E. and W. through Wady Halfa, and from the Red Sea (including the peninsula of Sinai) to the Libyan Desert. Of this, only the narrow Nile Valley, the Delta, and the oases, embracing a total area of 13,000 sq. miles, are habitable.

The Nile Valley has been for ages the seat of a dense population. The extensive remains of pyramids, temples, tombs, &c., dating from very early times, attest its former magnificence.

The **climate** is hot and dry, and but for the annual rising of the Nile the whole country would be uninhabitable.

PRODUCTS, &c.—The principal occupation of the inhabitants is agriculture. The **cultivated districts** are:—The **Delta,** the **valley of the river,** a depression irrigated by a canal from the Nile, known as the **Bahr Yusuf,** and several **oases,** of which the Oasis of Siwah, in the Libyan Desert, is the most noted.

The productiveness of Egypt depends upon the annual rise of the Nile This rising is caused by the rainfall on the Abyssinian Mountains and the districts of the Upper Nile. An ordinary rise at Cairo is about twenty-five feet. An excessive rise is liable to damage the embankments and crops of the higher levels, while a deficiency in the amount of water allows only a small area to be irrigated. Since the country has been under English influence, extensive works have been constructed so as to enable irrigation to be carried on throughout the year, particularly the great dam at Assuan.

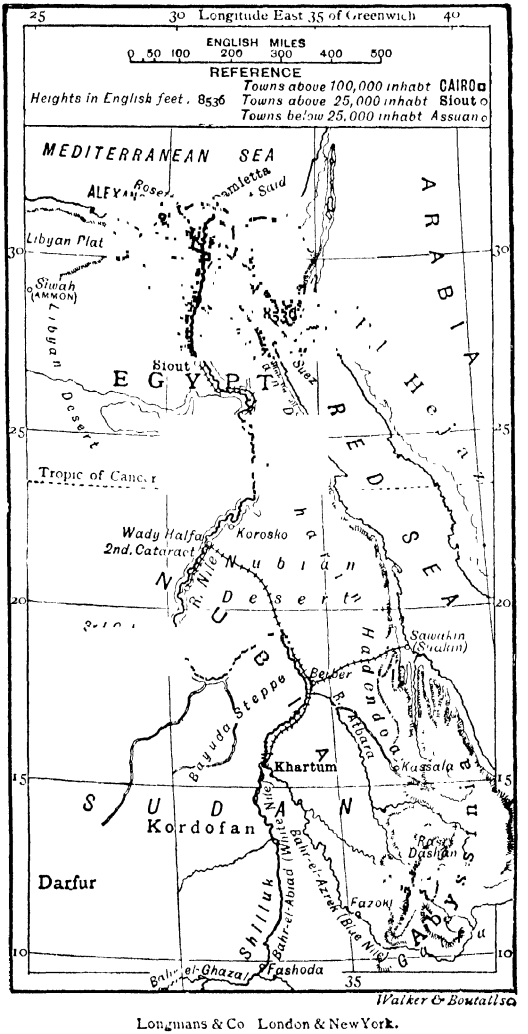
The principal crop is **cotton.** Egypt is exceeded only by the United States and India in the amount of cotton produced. Other important crops are **maize, wheat, sugar-cane,** and **dates.**

PEOPLE.—The cultivators are called **fellahin,** and are mostly of **Arab** descent. The descendants of the old Egyptians are a Christian race known as the **Kopts.** There are in addition a considerable number of **Bedouins,** chiefly nomads. **Population,** 9,820,000.

MEANS OF COMMUNICATION.—The **Nile** is the great waterway, and is navigable without hindrance to Assuan, where the first cataract is situated. In flood time both the first and second cataracts are navigable. The **Mahmudieh Canal** connects Alexandria with the Nile, while another canal unites the Nile with the Suez Canal.

The **Suez Canal** extends from Port Said on the Mediterranean to Suez on the Red Sea, and affords the nearest ship-route from Europe to

FIG. 108.—THE VALLEY OF THE NILE.



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Southern and Eastern Asia. It is 87 miles long, and was completed in 1869.

Railways connect most of the towns of the Delta, and one line extends for several hundred miles up the Nile Valley.

TOWNS.—**Cairo** (570), the capital, is situated at the head of the Delta, and is the largest town in Africa. To the south are situated the famous pyramids of Gizeh. **Alexandria** (320) is the chief port. **Rosetta** and **Damietta** are situated near the two principal mouths of the river. **Siout** is the chief town in Upper Egypt. **Assuan**, **Wady Halfa**, and **Karnak**, where are the ruins of **Thebes**, are also noteworthy places.

THE EGYPTIAN SUDAN

Prior to 1884 Egyptian territory extended up the Nile Valley to the Equator, including the districts of Nubia, Kordofan, Darfur, &c. A revolt led to these territories being abandoned, but they were recovered on the defeat of the Khalifa in 1898.

The northern part is mostly desert, the Nile Valley being the only habitable district; further south the rainfall is more abundant, and the country loses its desert character.

Durrah, a kind of millet, and **dates** are the principal food-plants, **sheep** and **camels** the most useful animals

Khartum, situated at the junction of the Blue Nile and White Nile, is the commercial capital of the district. Here the heroic General Gordon lost his life in 1885. **Sawakin**, the only port, is now occupied by the British.

POPULATION.—About two millions.

The **Sahara**, with an **area** of 2,500,000 sq. miles, is mainly under French influence and consists chiefly of a plateau, rocky in some parts and sandy in others, with depressions to the north and west. The evidence of fossils points to the fact that it was once the bed of a sea. The only habitable spots are the oases, where springs or underground streams furnish water for the date-palm and the coarse grasses.

Salt, obtained from the dried-up beds of lakes, is an important export to the Sudan.

EXAMINATION PAPERS

A. 1. What races inhabit Northern Africa, and what are their chief occupations?

2. Where is the cultivated land of Morocco situated? Say why this is so.

3. Arrange the States of Northern Africa: (1) according to area; (2) according to population; (3) according to importance. Which of them are under European influence?

4. Describe the surface of Algeria.

B. 1. Show how the French occupation has affected Algeria.

2. Where does the Sahara approach nearest to the Mediterranean? Give reasons why it does not approach so near towards the west.

3. What are the principal exports of Algeria?
4. Explain how the productiveness of Egypt is affected by the Nile.

C. 1. What are the habitable districts of Egypt? What is their total area and density of population?
2. What are the chief means of communication in—(1) Morocco, (2) Algeria, (3) Tripoli, (4) Egypt?
3. What is the commercial value of the Suez Canal (1) to Egypt, (2) to India?
4. What is the most important crop in Egypt?

D. 1. Draw a map of North Africa and insert the following towns:—Tangier, Constantine, Kairwan, Siout, Wady Halfa, Sawakin, Khartum, Alexandria, Algeria, Fez, and Tripoli?
2. What is meant by the term Egyptian Sudan? Say what you can of its climate, people, and products.
3. What districts export salt, dates, leather, cotton, alfa-grass, ostrich feathers, iron ore?
4. Compare the products of North Africa with those on the European side of the Mediterranean Sea.

THE SUDAN

GENERAL DESCRIPTION. - This term includes the portion of Central Africa lying between the Kong Mountains and the basin of the Nile. Owing to the abundant rainfall this is a fertile district, and in many parts is thickly peopled. Here is the true home of the **Negro** race; but a mixed race, the **Fulbeh** or **Fulah**, although not the most numerous, are the most enterprising and aggressive people of the Sudan. They have founded several powerful States in the Niger basin, of which **Sokoto** is the chief. **Bornu**, on the western side of Lake Chad, is the most powerful Negro state. **Muhammadanism** has now spread throughout the whole region.

The chief **means of communication** are the **Niger** and its tributary, the **Benue**, and by camel caravans from the States of Northern Africa.

The chief **occupations** are **agriculture** and **cattle-rearing**. **Durrah** is the chief food-plant. **Maize**, **rice**, and **cotton** are also extensively cultivated. The traffic in slaves is still largely carried on with Morocco and Tripoli.

Numerous **towns** are scattered throughout the Sudan, some of which have a large population. Among the most important are **Kuka**, the capital of Bornu, and **Kano** and **Timbuktu**, both great centres of caravan traffic with Northern Africa.

WESTERN AFRICA

GENERAL DESCRIPTION.—This is the district extending from the river Senegal to the Orange River. It is now almost exclusively under European influence; the only native States of importance were the kingdoms of **Dahomey** and **Ashantee**, on the Guinea Coast, and the Negro republic of **Liberia**, originally founded for freed slaves.

The coast region, from the Senegal to the Congo, has a hot moist climate, and is particularly unhealthy for Europeans. South of the Congo the coast-strip has a deficient rainfall. This arid district increases in width towards the south, where the Kalahari Desert extends inland to the river Limpopo.

I. **BRITISH POSSESSIONS.**—These lie between the Senegal and Niger, and embrace a total **area** of about 600,000 sq miles. **Palm oil** and **kernels**, **gold**, **ivory**, **rubber**, **ostrich feathers**, and **gums** are the chief **exports**.

The chief settlements are:—

1. The **Gambia Settlements**, of which **Bathurst** is the largest station.

2. **Sierra Leone**, on the West Coast, founded in 1787, and afterwards used as a place of refuge for freed slaves. **Freetown** is the capital and chief port.

3. The **Gold Coast** and **Lagos**, on the Gulf of Guinea. **Cape Coast Castle** is the seat of administration, and exports gold. **Lagos** is the chief centre of the **palm-oil** trade. Since 1896 **Ashantee** has been a British protectorate.

4. **Nigeria, Northern and Southern**, with a population of over 25 millions, embraces the whole of the basin of the Lower Niger, extending inland to the borders of Lake Chad. **Asaba** is the seat of the administration. Steamers ascend the Niger as far as **Rabba**, where the rapids begin. The Benue is navigable to **Yola**.

II. **GERMAN POSSESSIONS.**—The Germans possess:—1. **Togo Land**, between Dahomey and Ashantee. 2. **Kamerun**, a district extending from the Bight of Biafra to Lake Chad. 3. **German South-West Africa**, an arid district between Cape Frio and the Orange River, and extending inland to the British possessions. **Angra Pequena** is the chief station. **Walvisch Bay**, the only good harbour in German South-West Africa, belongs to Great Britain, and is under the High Commissioner of British South Africa.

III. **FRENCH POSSESSIONS.**—France claims the whole of Western Africa from Cape Blanco to the Congo, excluding the British and German spheres of influence, and including the Western Sahara. The chief settlements are **Senegal**, of which **Fort Louis** is the capital, and **French Congo**, which extends inland to the Nile basin. **Dahomey** is now a French protectorate. **Abomey** is the capital.

IV. **PORTUGUESE WEST AFRICA.**—This extends from the Congo to

Cape Frio and inland to the Upper Zambesi. The **area** is about 500,000 sq. miles. The highland region behind the arid coast district is a rich land with a healthy climate, and produces **coffee, palm oil,** and **rubber.**

Loanda is the capital and chief port. **Benguela** and **Mossamedes** are the only other important stations.

V. **THE CONGO FREE STATE.**—This State has an **area** of nearly one million sq. miles, and includes most of the basin of the Congo. It is now practically under Belgian administration. The Congo is navigable to **Matadi**; from here rapids obstruct the navigation for about 200 miles. A railway has been constructed from **Matadi** to **Leopoldville**, above the falls, from whence the river is navigable for 1,000 miles to Stanley Falls, and has in places a width of ten miles.

The chief **exports** are **palm oil, ivory,** and **rubber.**

Boma is the principal port.

Native State.—**Liberia** is an Independent Negro republic, founded in 1820 for freed slaves, lying south of Sierra Leone. **Monrovia** is the capital. The **Kroomen**, a native race inhabiting the coasts of Upper Guinea, make excellent sailors.

EXAMINATION PAPERS

A. 1. Give the boundaries of the Sudan. Account for its fertility.
2. How is trade carried on in the Sudan, and what are the chief means of communication?
3. What are the most important States of Central Africa, and where are they situated?
4. Show how Western Africa is under European influence.

B. 1. What are the typical exports of Western Africa? and give the chief ports from which they are shipped.
2. What are the principal British possessions in Western Africa? Name the chief towns
3. Give the situation of the following:—Freetown, Port Louis, Loanda, Leopoldville, Rabba, Kuka, Stanley Falls, and Timbuktu.
4. What are the two great waterways of Western Africa? Describe them.

BRITISH SOUTH AFRICA

The greater portion of Southern Africa is now under British control. It consists of Colonies and Protectorates. The principal divisions are:

	sq miles	inhabitants
Cape Colony (including **Griqualand West**)	276,775	2,405,000
Pondoland	4,010	188,000
Bechuanaland	51,424	72,700
Bechuanaland Protectorate	275,000	200,000
Basutoland	10,293	350,000

	sq. miles	inhabitants
Natal (including **Zululand**)	36,000	1,100,000
Orange River Colony	48,300	385,000
The Transvaal . . .	119,200	1,350,000
British South Africa Company's Territories, or **Rhodesia**	750,000	over 600,000
British Central Africa Protectorate . .	42,000	„ 750,000

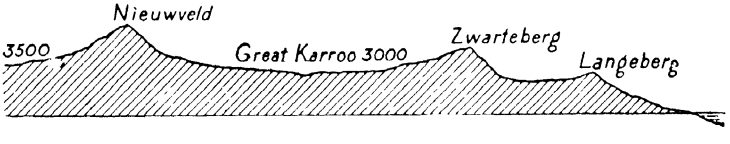
The whaling station of **Walvisch Bay**, the only good harbour in German South-West Africa, also belongs to Cape Colony.

COAST-LINE.—The coast-line, extending from the mouth of the Orange River to the neighbourhood of Delagoa Bay, is comparatively unbroken and possesses few good harbours. The western portion is particularly dreary and desolate.

The chief indentations are **St. Helena Bay**, **Table Bay**, and **False Bay** at the south-west corner, and **Algoa Bay** on the south. The **Cape of Good Hope** and **Cape Agulhas** are the most prominent capes.

RELIEF.—The terraced formation of the land in Northern Africa is repeated here to a more marked extent. In South

FIG. 109. SECTION ACROSS CAPE COLONY.



Africa the land rises from the coast in **three terraces**, the edges of which present the appearance of mountain ranges on the seaward side. First comes the **coast-strip**, which on the south and east includes many fertile districts. The **first terrace** is a productive region extending northwards to the **Zwarteberg Range.** The **second terrace** is the chief [illegible] district of the colony, and extends to the main mountain range, which rises to a height of 8,000 ft., and is known as the **Nieuwveld**, &c. This range is continued towards the north-east as the **Drakenberg Mountains**, which attain an elevation of over 10,000 ft. Beyond this range comes the **third terrace**, which falls slightly to the Orange River. Beyond this is the **Kalahari Desert**, a region of deficient rainfall extending northwards for a thousand miles.

The terraces are known as **Karroos** and slope slightly towards the interior. During the dry season the ground is baked hard and is destitute

of vegetation, but with the advent of the rains the plants, whose roots are protected from the heat by a woody covering, spring up, and the plain is quickly covered with vegetation. The **Great Karroo**, on the second terrace, is from 60 to 70 miles in width. The rivers find their way to the sea through the edges of the terraces by deep gorges. The mountain ranges are massive in outline and flat-topped to a great extent.

RIVERS.—Deficiency of water is one of the drawbacks to South Africa. The streams of the south and west are torrents after the rains, but dried-up watercourses for most of the year. It is only where the rainfall is more abundant that the streams have a constant flow of water. Nearly all the river channels are obstructed by rapids, and are thus of but little service for navigation. There are three large rivers:

1. The **Orange River** rises in the Drakenberg Mountains, and flows in a westerly direction for over 1,000 miles to the Atlantic, forming for a considerable distance the northern boundary of Cape Colony. Its principal tributary is the **Vaal.**

2. The **Limpopo** rises in the Transvaal, forms the northern boundary of the State, and after describing a great curve of over 1,000 miles empties into the Indian Ocean to the north of Delagoa Bay.

3. The **Zambesi** rises in Lake Dilolo, and flows for a considerable distance through the British South Africa Company's territories. It then enters Portuguese East Africa, and reaches the Indian Ocean after describing a double curve of over 2,000 miles.

Of the minor rivers, the **Olifants** on the west, the **Gouritz** and **Great Fish Rivers** on the south, and the **Tugela** between Natal and Zululand, are among the most important.

CLIMATE.—The climate is dry on the whole, and exceedingly healthy. The coast district on the eastern side is, however, subject to fevers.

The **rainfall** varies greatly in different districts. The eastern side, which is under the influence of the trade-winds, has its rainy season from September to April; the south-western corner is beyond the influence of the trade-winds, and receives its moisture from the north-west winds of the Atlantic from April to October. On the east side the coast range condenses the moisture and a plentiful rainfall occurs on the seaward side, this rainfall corresponding in time to the summer monsoon, and being brought by the same winds that supply India with rain during that season; on crossing the range the winds become

comparatively dry, and the north-western part of the colony is almost rainless.

VEGETATION.—There are not many large areas covered with forests; flowers, especially **heaths** and **bulbous plants,** exist in great variety; **grasses** and **herbs** supply good pasture for cattle and sheep; **fruits,** both native and European, are extensively grown (the **grapes** of the colony are said to be the best in the world); and **maize, wheat, millet,** and **tobacco** are largely cultivated. **Sugar** is also an important product in Natal.

ANIMAL LIFE.- The larger **wild animals** are now scarcely found in the south. **Leopards, hyænas, jackals,** are the most destructive carnivora; vast herds of **antelopes, zebras, quaggas,** &c., live on the grass of the plains, and large **baboons** cause great damage to the gardens; **ostriches, eagles** and **vultures, bustards, pheasants, partridges,** and **quails** are found in great numbers; the **python** is the largest of the numerous varieties of snakes, many of which are very poisonous. Among the insects, the **tse-tse fly,** whose bite is fatal to horses, cattle, &c., **mosquitoes, dragon-flies,** and **locusts** may be mentioned.

The chief **domestic animals** are **sheep, cattle, horses, Angora goats,** and **ostriches.**

MINERALS.—The mineral wealth of South Africa is very considerable. The **diamond** mines of Kimberley are the most productive in the world; the **goldfields** of the Transvaal have a greater output than those of Australia; while the **copper ore** of Namaqualand yields a rich return of metal. **Coal, iron, silver, lead, manganese,** and other metals are also found, but are not worked to any great extent.

PEOPLE.—The **colonists** are mostly of Dutch and British descent. The **natives** belong to two races: 1. The **Kaffirs,** a tall, well-built, warlike race, who have offered at various times considerable resistance to British rule. They inhabit the eastern portions of South Africa and are now peaceably engaged in cattle-rearing and agriculture. 2. The **Hottentots** and **Bushmen** of the western districts are a small, stunted race, and low in the scale of civilisation. The Hottentots rear large herds of cattle and fat-tailed sheep. The Bushmen are skilful hunters.

There are many Indian emigrants in Natal, and Chinese have been imported to work the gold mines of the Rand.

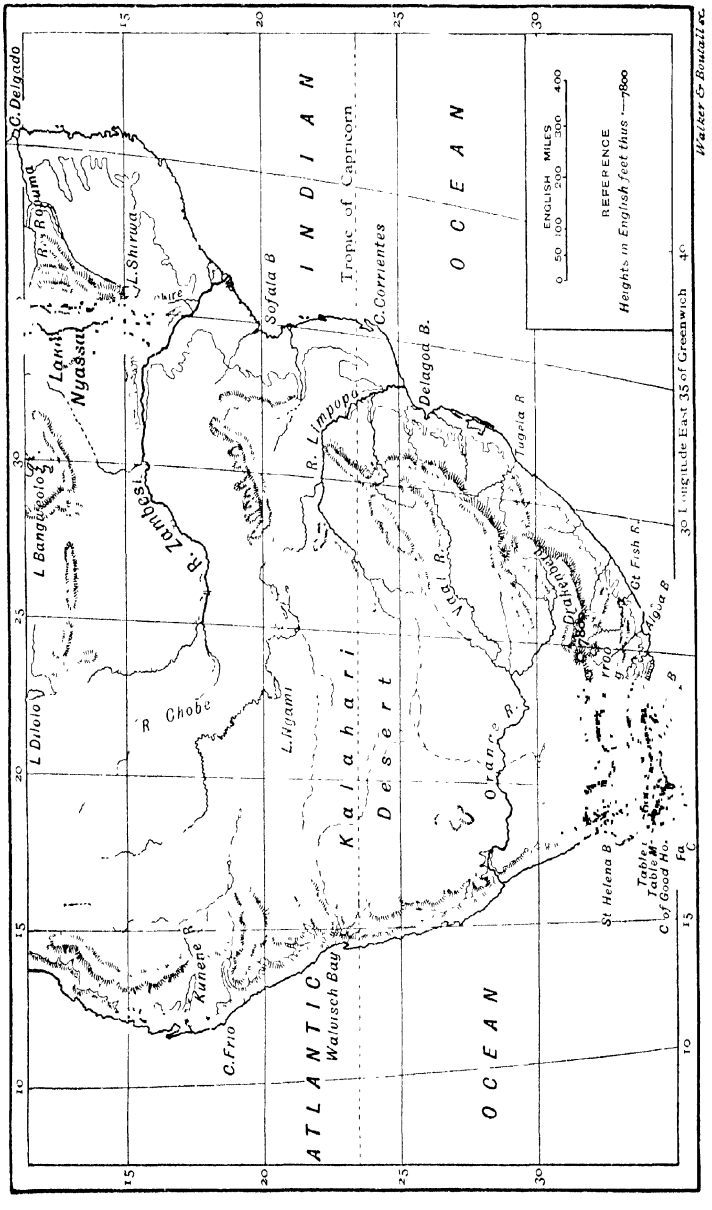


FIG. 110.—SOUTH AFRICA: PHYSICAL.

Longmans & Co London & New York.

MEANS OF COMMUNICATION.—Since the discovery of diamonds and gold the railways of South Africa have been largely developed. The principal are:—

1. A line from Cape Town across the Great Karroo, through the diamond fields, and on through Bechuanaland to Mafeking and Bulawayo, whence it has been continued to Salisbury, in Mashonaland. A branch has also been laid between Bulawayo and Victoria Falls.

2. Lines from Port Elizabeth, East London, and Durban, extend to the Orange River Colony and the Transvaal Colony.

3. A line from Delagoa Bay to the Transvaal has been completed, and another from Beira, in Portuguese East Africa, to Mashonaland has been completed as far as Salisbury, and affords the readiest means of communication between those districts and the coast.

The chief **occupations** of the inhabitants are the rearing of **sheep**, **cattle**, and **goats**, for wool, hides, and hair; **ostrich farming**, **mining**, and **agriculture**, including corn-growing, vine culture, and sugar-planting in Natal.

The principal **divisions**, with their chief **towns**, &c., are as follows:—

I. **CAPE COLONY** has an **area** of 276,000 sq. miles, and a **population** of 2,405,000, of whom more than two-thirds are natives. It was first occupied by the Dutch in 1652, and was finally taken by the British in 1806. It is a self-governing colony, with two Houses of Parliament, and a Governor. The High Commissioner for South Africa resides at Cape Town.

Kaffirland, a district between the Great Kei River and Natal, and **Walvisch Bay,** in German South Africa, are dependencies of Cape Colony.

The chief **exports** are **wool**, **mohair**, **diamonds**, **copper**, and **ostrich feathers.**

TOWNS.—The capital is **Cape Town** (169), a fine city, with great trade, situated at the foot of Table Mountain. **Port Elizabeth** (33), on Algoa Bay, is the most important trading centre of the eastern part of the colony. **East London** is a rising port on the Buffalo River **Simon's Town**, on False Bay, is the South African naval station. Of the **inland** towns, **Grahamstown** (10), to the east of Port Elizabeth, is the chief town of the eastern district. **Kimberley** (30), the centre of the diamond fields, is the largest inland town **Beaufort**, at the foot of the **Nieuwveld Mountains**, is the centre of the wool-producing district. **Paarl** is situated in the midst of the wine-producing district in the south-west.

II. **NATAL,** with Zululand, has an **area** of about 36,000 sq. miles, and a population of 1,100,000, most of whom are Kaffirs.

It has a representative government, and became a British possession in 1843.

The chief **exports** are **wool, hair, hides, and sugar.**

Durban (60) is the principal seaport; **Pietermaritzburg**, in the interior, is the capital.

Zululand.—After the war of 1879, the military power of the Zulus was broken up, and their country subsequently became part of the Empire.

III. **BECHUANALAND** is a Crown Colony, with an area of 51,000 sq. miles. It is an open grassy country, inhabited by the Bechuanas, and well suited for cattle-rearing. Mafeking and Vryburg, both on the line of rail from Cape Town, are the chief towns.

The **Protectorate of Bechuanaland** extends north of the Crown Colony to latitude 22° S.—213,000 sq. miles.

Palapye, the largest native town in South Africa, is the chief town.

IV. **BASUTOLAND**, a mountainous and fertile district, is inhabited by a warlike and industrious race of Kaffirs. It became a Crown Colony in 1884.

V. **THE BRITISH SOUTH AFRICA COMPANY'S TERRITORIES or RHODESIA.**—This is a vast region, divided into two parts by the Zambesi.

Matabeleland and **Mashonaland**, on the southern side of the river, are fertile, well-watered districts rich in minerals. In 1893 the aggressive action of the warlike Matabele led to a war, which resulted in their capital, **Bulawayo**, being captured and their power broken.

Salisbury, in Mashonaland, is the seat of the administration, and is connected by telegraph and railway with Cape Colony. A railway from Beira, on the coast in Portuguese territory, has been completed as far as Salisbury and affords through railway communication from Beira to Cape Town.

North of the Zambesi, the district lying along the river Shire and to the west of Lake Nyassa, opened up by missionaries and the African Lakes Company, now forms the **British Central Africa Protectorate.** A good road leads from the north of Lake Nyassa to the south of Lake Tanganyika, and gunboats are maintained on Lake Nyassa to check the slave trade and maintain order.

Zomba and **Blantyre** are the chief stations. The outlet for the trade of this district is by the Shire Valley to **Chinde** on the Zambesi.

VI. THE ORANGE RIVER COLONY

This colony lies between the Vaal and Orange Rivers, and has an **area** of 48,300 sq. miles and a population of about 385,000. In 1836 some Boers, who were dissatisfied with British rule in Cape Colony, established a republic, which was annexed by the British in 1900.

The surface is an undulating plateau, and the chief **products** are **diamonds, gold, wool, hides,** and **ostrich feathers.**

Bloemfontein is the capital, and is connected by railway with Cape Colony. **Harrismith** is the chief town in the eastern portion, and is connected by railway with Natal.

VII. THE TRANSVAAL COLONY

The Transvaal is a British colony lying north of the Orange River Colony between the Vaal and Limpopo Rivers, and has an **area** of 119,000 sq. miles, and a **population** of over one million, most of whom are natives. Here also a republic was founded by Boers, chiefly from Natal and the Orange Free State. In 1877 it was annexed by the British, but regained its independence in 1881. In 1900 it was again annexed by Great Britain.

The surface is undulating in parts and mountainous in the east.

The discovery of the rich **goldfields** of **Johannesburg** and **Barberton** led to a great influx of settlers.

The chief **industries** are the rearing of **sheep** and **cattle** and **gold-mining.** **Grain** and **tobacco** are also cultivated.

The capital is **Pretoria** (12). The largest town is **Johannesburg** (158).

The native state of **Swaziland** now forms part of the Transvaal Colony.

Both the Orange River Colony and the Transvaal have recently been granted representative government.

EXAMINATION PAPERS

A. 1. Name the British Colonies, Protectorates, and Spheres of Influence in South Africa.

2. Describe the relief of Cape Colony.

3. What are the characteristic features of the coast of South Africa? Name the chief inlets.

4. Why is the rainfall more abundant on the east of South Africa than on the west? Compare the rainfall with that of India.

B. 1. Name the three great rivers of South Africa, and describe their courses.

2. What are the Karroos, and what industries are connected with them ?
3. Give the situation of the chief ports of South Africa.
4. What are the most common plants, animals, and minerals of Cape Colony ?

C. 1. How would a traveller from India reach the following places:—Johannesburg, Salisbury, Vryburg ?
2. What are the chief industries in (1) Cape Colony, (2) Natal ?
3. Draw a map of South Africa and show the boundaries of all the British Colonies.
4. Why are the following important :—Kimberley, Johannesburg, Grahamstown, East London ?

D. 1. What are the most important exports of (1) Cape Colony, (2) Natal ?
2. Say what you can of the Bushmen, Boers, Kaffirs.
3. Describe the situation and products of the Transvaal.
4. Where are the following:—Mashonaland, Walvisch Bay, Pretoria, Bloemfontein, Blantyre, Pietermaritzburg ?

EASTERN AFRICA

GENERAL DESCRIPTION.—This name is applied to the regions lying between Delagoa Bay and the Egyptian frontier. The whole district is now under the control of **Portugal, Germany, England,** and **Italy.**

This part of Africa is at present but little developed. The coast district in many parts is very unhealthy. Goods are carried by **human porters** in British and German East Africa, the tse-tse fly and the climate preventing the use of cattle and horses as beasts of burden. Farther north, in Somaliland, where the climate is drier, the **camel** is used.

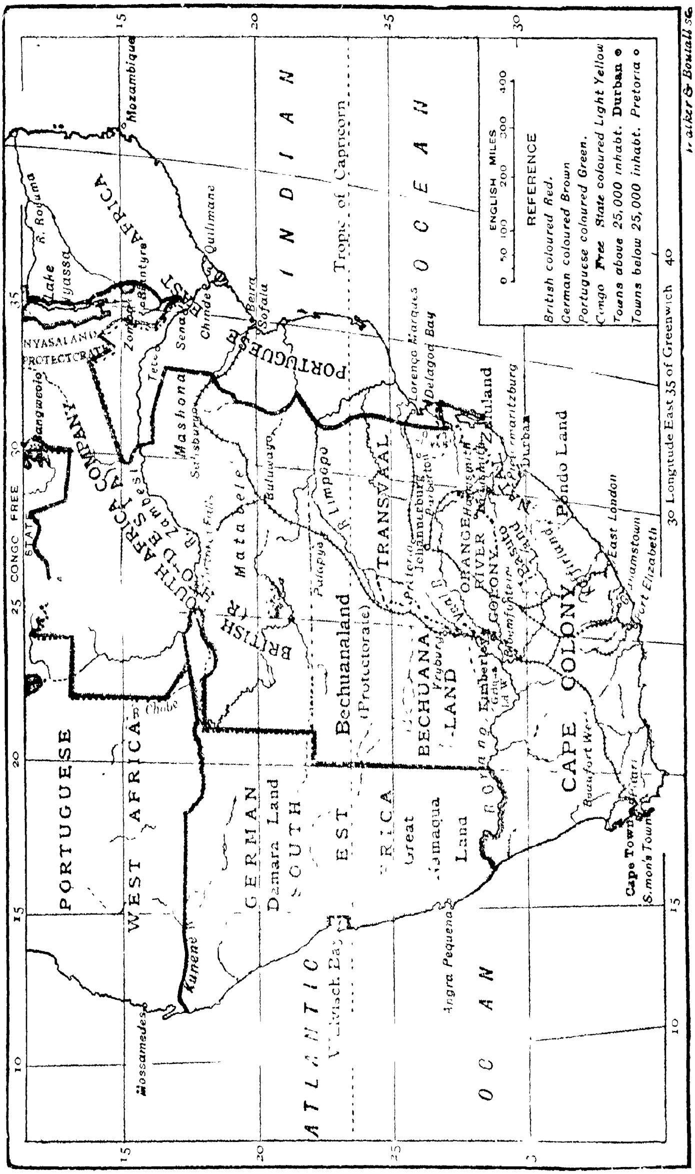
The **exports** are of a similar character throughout the district, the chief being **oil-seeds, rubber, ivory, gums,** and **hides.**

I. **PORTUGUESE EAST AFRICA.**—This district has an **area** of 290,000 sq. miles, and extends along the coast from Delagoa Bay to the river Rovuma, while inland it is bounded by the British possessions.

Fruits of various kinds, grain, cotton, tobacco, and coffee grow in great luxuriance where cultivated.

TOWNS.—Lorenço Marques, an excellent harbour on Delagoa Bay, is likely to become an important centre of trade, as a railway has been constructed to the Transvaal goldfields. **Mozambique** is the chief town of the northern district. **Beira** has a good harbour, and is the starting-point of a railway to Mashonaland. **Quilimane, Sena,** and **Tete** are stations on the Zambesi.

FIG. 111.—SOUTH AFRICA: POLITICAL.



II. **GERMAN EAST AFRICA.**—This extensive region has an area of 380,000 sq. miles. It lies between Portuguese and British East Africa, extending inland to Lakes Nyassa, Tanganyika, and Victoria Nyanza.

Bagamoyo is the chief port.

III. **BRITISH EAST AFRICA.**—This vast district covers an area of about 1,000,000 sq. miles, and extends from the borders of German East Africa to the river Juba, which is navigable for 400 miles. Inland it extends to the Nile.

For administrative purposes it is divided into **The East African Protectorate** and **The Uganda Protectorate**, both being under Imperial control. **Mombasa** is the chief town, and has a good harbour.

THE ZANZIBAR PROTECTORATE.—**Zanzibar** is an island off the coast of German East Africa. The Arab Sultan, who is now under British protection, once ruled over the neighbouring mainland. The town of **Zanzibar** (30) is the chief centre of trade in Eastern Africa.

THE SOMALILAND PROTECTORATE.—The **Somali Coast**, a district bordering the southern shores of the Gulf of Aden, is a British protectorate. **Berbera**, the chief port, carries on a considerable trade with **Harrar**, in the interior.

THE WITU PROTECTORATE is at the mouth of the R. Tana.

IV. **ITALIAN POSSESSIONS.**—These consist of the Colony of **Eritrea** and a **Protectorate** on the **Somali Coast.**

Massaua, on the Red Sea, is the chief port and seat of Government of Eritrea.

ABYSSINIA, an ancient empire, till 1896 an Italian Protectorate, has now recovered its independence. Its surface is exceedingly mountainous, and its people, who are nominally Christians, are chiefly engaged in pastoral occupations. **Lake Dembea**, through which the Blue Nile flows, lies at an altitude of 6,000 ft. **Addis Abeba** is the capital, and **Gondar** and **Ankobar** are two of the principal towns.

AFRICAN ISLANDS

Most of the African islands are mountainous, and of volcanic formation, and all belong to European nations.

In the north-west are the **Azores, Madeira,** and **Cape Verde Islands,** belonging to **Portugal,** and the **Canary Islands** to **Spain.**

Wine and fruit are the chief exports of the Azores and Madeira. The Canaries contain the famous volcano of **Teneriffe**, 12,000 ft. high.

In the Gulf of Guinea there are several islands, of which the **Spanish** island of **Fernando Po** is the largest.

The **British** islands of **St. Helena** and **Ascension** lie far out in the Atlantic. They are calling-places for ships.

In the south-east lie the large island of **Madagascar,** the **British** islands of **Mauritius** and the **Seychelles,** the **French** islands of **Bourbon,** and the **Comoro group.**

Madagascar, one of the largest islands in the world, has an **area** of 228,000 sq. miles and a **population** estimated at 2,244,000. A range of mountains extends from north to south. The eastern side has a heavy rainfall and a luxuriant vegetation. The capital is **Antananarivo**, situated in the interior. The French sent an expedition in 1895, took the capital, and declared a protectorate over the whole island. In 1896 it was formally declared a French colony.

Mauritius and **Bourbon** export great quantities of **sugar**.

Socotra, off the eastern corner of Africa, belongs to the British Empire.

EXAMINATION PAPERS

A. 1. Mention in order from the south the possessions of the European Powers in Eastern Africa.

2. How is traffic carried on, and what are the chief articles of export in Eastern Africa?

3. Give the name and situation of the chief ports in Eastern Africa.

4. Why are Lorenço Marques, Beira, and Zanzibar important?

B. 1. Describe the situation, surface, and people of Abyssinia.

2. What are the chief groups of islands belonging to Africa? Where are they situated?

3. What places are noted for sugar, wine, oranges, ivory, gums, coffee?

4. Compare Eastern and Western Africa as to their products and the facilities for trade.

AMERICA

NORTH AMERICA

GENERAL DESCRIPTION.—**North America** is somewhat the larger of the two great masses of land which form the continent of the Western Hemisphere. North America resembles South America in several respects.

(*a*) Each is broad in the northern part, and tapers towards the south.

(*b*) The eastern coast of each is generally low, with somewhat shallow water immediately adjoining, and is fringed with narrow islands, which make a double coast-line. The western coast is high, with deep water near the shore, and is much less indented than the east.

(*c*) Each has a great mountain system running throughout its whole length, and much nearer to the west than to the east; while a mountain system of less importance lies near to the east coast in each.

(*d*) Great plains extend from north to south, bounded by high land on east and west.

(*e*) Great rivers are a striking feature, and have a general resemblance in direction and size.

BOUNDARIES AND EXTENT.—North America is, except for the narrow isthmus of Panama, bounded on all sides by water—on the north, the Arctic Ocean; on the west, the Pacific Ocean; on the east, the Atlantic Ocean.

The area, including Greenland and the northern islands, nearly $9\frac{1}{2}$ millions of sq. miles. Mainland alone, 8 millions. (Area of Asia, 16 millions; Africa, $11\frac{1}{2}$ millions; Europe, $3\frac{3}{4}$ millions of sq. miles.)

It covers about the same latitudes from north to south as Asia. Greatest length, from Point Barrow to Panama, about 4,300 miles. Greatest breadth, about 3,100 miles.

COAST-LINE.—North America has many more indentations and a greater length of coast-line than South America. The

three northern continents—Asia, Europe, and North America—have a much greater proportion of coast-line to area than the three southern continents—Australia, Africa, and South America.

The east coast is washed towards the south by the warm Gulf Stream, which takes its name from the Gulf of Mexico, and along its northern shores by the cold Arctic Current. Where these two meet—about the latitude of Newfoundland—fogs prevail.

SEAS AND OPENINGS.—**Hudson Bay** and **Baffin Bay** in the north are frozen over during most of the year; **Gulf of St. Lawrence**, with the great estuary of the river of that name; **Gulf of Mexico**, with **Campeachy Bay**; **Caribbean Sea**, with the **Bay of Honduras**; **Gulf of California**; **Puget Sound**; **Behring Sea**, between Alaska and Siberia.

STRAITS.—**Davis**, from the Atlantic Ocean into Baffin Bay.

Hudson, from the Atlantic into Hudson Bay.

Belleisle, between Newfoundland and Labrador.

Long Island Sound, between Long Island and the mainland.

Florida Channel, between Florida and Cuba.

Yucatan Channel, between Yucatan and Cuba.

Queen Charlotte Sound, between Vancouver Island and British Columbia.

Behring, between Alaska and Siberia, and joining the Pacific and Arctic Oceans.

ISLANDS.—The **Arctic Archipelago**, consisting of many great islands, which have an exceedingly cold climate and are imperfectly explored. The islands in the Gulf of **St. Lawrence**, of which **Newfoundland**, **Prince Edward Island**, and **Cape Breton Island** are the chief. **Long Island**, on the coast of the United States, near New York. **Bermuda Islands.** On the Pacific coast are **Vancouver** and **Sitka**, and also the **Aleutian** and **Pribylov** groups.

The last named have become of great importance as being the breeding-place of great numbers of seals.

CAPES.—**Farewell**, the southern point of Greenland.

Race, the south-eastern point of Newfoundland.

Cod, in the United States. **Sable**, the southern point of Florida. **San Lucas**, at the extremity of the peninsula of

FIG. 112.—NORTH AMERICA: RELIEF.

Lower California. **Barrow**, the most northerly point of the continent.

RELIEF.—From the mouth of the Mississippi a depression extends northward almost without interruption to the Arctic Ocean, forming the Valley of the Mississippi and the basin of the Red River of the North, and being occupied in its northernmost portion by numerous lakes.

Westward from the Mississippi Valley the surface gradually rises by rolling plains called **prairies** to the **Great Plateau** which occupies most of the western half of North America. This plateau is crossed by numerous mountain ranges, generally from north-west to south-east, of which the **Rocky Mountains** form the chief. The Plateau is bordered on the west by the **Coast Range** and **Cascade Range.** The **Sierra Nevada** lies a little to the east of these ranges, and parallel with them. The greatest height is reached in Alaska, where **Mt. St. Elias** is 19,500 ft. high. In the United States are many peaks in the **Rockies**, and the **Sierra Nevada**, between 14,000 ft. and 15,000 ft. high. In Mexico some of the peaks reach a height of 18,000 ft.

The **Appalachian** or **Alleghany** Mountains stretch from the mouth of the St. Lawrence for about 900 miles in a south-west direction, and comprise several parallel ranges with long valleys between. The highest point is **Black Dome**, about 7,000 ft.

PLAINS.—The **prairies** lie between the lowlands of the Mississippi Basin and the edge of the Great Plateau.

The **Eastern Lowlands** lie between the prairies and the Appalachians.

The **Northern Lowlands** lie along the Arctic Slope, and resemble the **tundras** of Russia and Siberia.

RIVERS.—The position and direction of the highlands of North America determine the courses of the great rivers which flow outwards to all the surrounding seas. The main watersheds are the two mountain systems of the east and west, but a cross-ridge along the border between Canada and the United States divides the basin of the Mississippi from the Canadian river system. The most important rivers are :—

(*a*) **To the Atlantic.**—**St. Lawrence**, and numerous streams from 300 to 500 miles in length, draining the eastern slopes of

the Appalachians. Of these, the **Hudson** is commercially the most important.

(*b*) **To the Gulf of Mexico.**—The **Mississippi** and **Rio Grande del Norte.**

(*c*) **To the Pacific.**—**Colorado, Columbia, Fraser,** and **Yukon.**

(*d*) **To the Arctic.**—**Mackenzie.**

(*e*) **To Hudson Bay.**—**Nelson.**

For a description of these streams, *see* chapters on the separate countries.

LAKES.—A very considerable portion of the surface of the northern half of North America east of the Rocky Mountains is occupied with lakes, many of which are of great commercial importance.

The largest and most important are the great lakes which drain into the river St. Lawrence, viz. **Superior, Huron, Michigan, Erie,** and **Ontario. Superior** is the largest fresh-water lake in the world, having an area of 32,000 sq. miles, a third as large again as Ceylon, and the total area of the five lakes is about 100,000 sq. miles. Of the other Canadian lakes, **Great Bear Lake, Great Slave Lake, Deer Lake,** and **Athabasca** are drained by the Mackenzie into the Arctic Ocean, and **Lake Winnipeg** by the Nelson into Hudson Bay.

All of these lakes are either completely or partly blocked by ice in winter.

CLIMATE.—Owing to the great length of the continent from north to south, there is necessarily great variety of climate; but, speaking generally, hot summers extend far to the north and cold winters are occasionally experienced even so far south as the shores of the Gulf of Mexico.

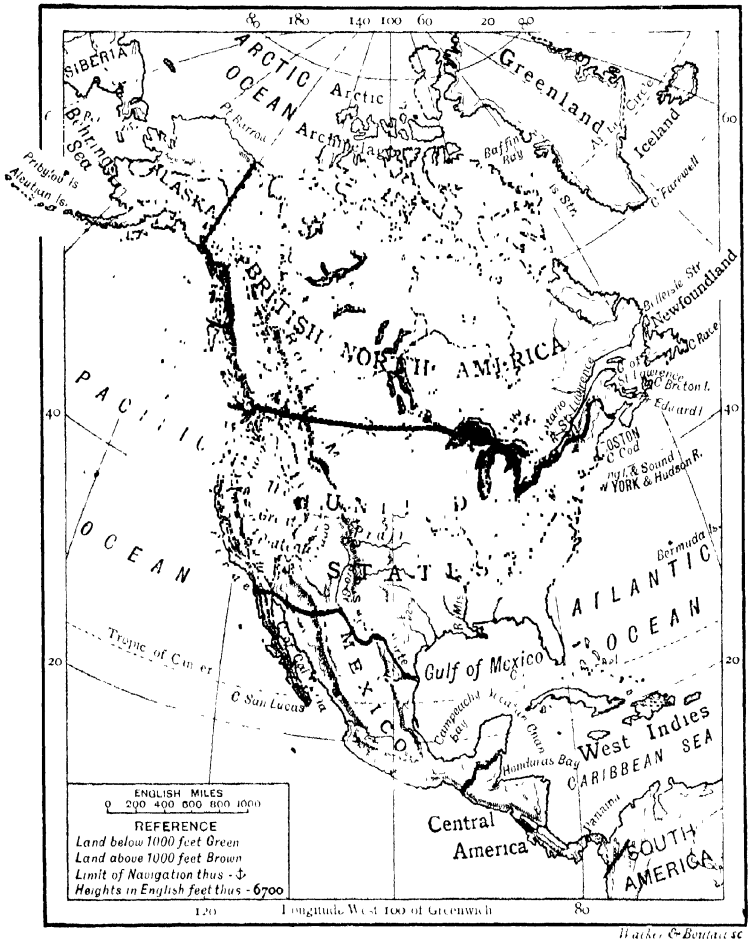
This is chiefly owing to the great extent of low land which lies between the Arctic coast and the Gulf of Mexico.

The rainfall is sufficient along the Atlantic and Pacific coasts and over the greater part of the lowlands, but is very scanty upon the Great Plateau of the West. The climate is generally healthy, and the greater portion of North America is habitable by white races.

As in Europe, the east is lower in temperature than the west. In the almost rainless depressions of the Great Plateau excessive heat and cold are experienced.

In the tropical regions the climate of large districts is temperate, owing to the elevation of the greater part of the surface.

FIG. 113.—NORTH AMERICA: PHYSICAL AND POLITICAL.



Longmans & Co London & New York

It will be seen that the climate of North America is, generally speaking, similar to that of Asia. The interior is not,

however, subject to such great extremes, and the northern limit of wheat is higher in the former than in the latter continent.

SOIL.—East of the Rocky Mountains the soil is generally productive, even over large areas on the plain of British North America which have been considered unfit for cultivation; but the crops there and in the northern parts of the United States are liable to injury from early frosts.

There is a great extent of very barren soil upon the Great Plateau, where the very slight rainfall renders successful cultivation impossible except by irrigation. Along the northern coasts the soil is frost-bound during the greater part of the year, and at some little distance from the surface is never thawed.

PRODUCTIONS.—1. **Vegetable.**—When discovered by Europeans, North America possessed many valuable plants, three of which—viz. **tobacco, maize,** and **potato**—have been since widely cultivated in the Old World. Besides these were **cotton, vine,** and many excellent timber trees, as **firs, pines, cedars, oak,** and **maple.** Numerous plants have been introduced from the Old World, and form important crops, as **wheat and other cereals, sugar-cane,** and **coffee.**

2. **Animal.**—The animal products are almost all derived from the domestic **horse, cattle, sheep,** and **pigs,** all of which have been introduced by Europeans. Wild animals were once very numerous, but are fast diminishing as the land is occupied and cultivated. The most valuable product of wild animals is **furs,** from the seal, beaver, and many smaller animals. The **bison,** or **buffalo,** which a few years ago roamed over the western plains in great herds, is now extinct as a free wild animal. The chief animals of the chase are the **elk tribe, deer, panthers, lynxes,** and **wolves,** in the United States and British North America. In Mexico and Central America are many **monkeys** and other tropical animals. **Birds** are very numerous and in great variety, from the **wild swans, geese, turkeys,** &c., of the temperate and Arctic regions to the **humming birds** of the tropics. **Fish** good for food are plentiful in salt and fresh water—the **cod, salmon, shad,** and **oyster** are some of the most valuable.

3. **Mineral.**—Almost every valuable mineral exists in North America in large quantities. The precious metals, gold and silver, have been freely obtained amongst the western mountains,

though the production of the former is now less than it was some years ago. **Coal** and **iron** are abundant in many parts of the lowland regions. **Copper, quicksilver, petroleum** and **natural gas,** and **salt** are worked in many districts.

COMMUNICATIONS AND COMMERCE.—The **waterways** of North America are of great commercial importance. All the great rivers are navigable—the Mississippi as far as St. Paul, the St. Lawrence as far as the head of Lake Superior, and the rivers of Canada are largely utilised for internal communication. The ports on the great Lake system have traffic equal to two-thirds that of New York.

Canals have been constructed where rapids or waterfalls render river navigation difficult.

The **railways** of North America are very important. Six trunk lines cross the continent, connecting the Atlantic and Pacific Oceans, and Japan is four days nearer to England by the western than by the eastern route.

Proximity to Europe accounts for most of the seaports being on the east coast, the United Kingdom taking two-thirds of the total exports of the United States and about an equal share of those of Canada. The Pacific trade is, however, rapidly increasing.

PEOPLE.—The native inhabitants are known as '**Indians,**' having received this name from the first European explorers, who had mistaken the country to which they had arrived. These people still form the majority of the population in Mexico and Central America. In the United States they are comparatively few, and reside mostly on lands set apart for them, called reservations. Some of the tribes have made considerable advance in civilisation, whilst others are still little better than savages. In British North America the natives roam freely through the great forests and plains, hunting fur animals.

Europeans, descendants of immigrants, form the great bulk of the population, the most numerous being of **British** descent. There are also many **Germans, French,** and **Spanish,** and considerable numbers of other European peoples. Immigration still goes on; restrictions are placed upon it in the United States, but there is still great scope for people to aid in opening up the interior of Canada.

The planters of the southern States formerly imported much **negro** slave labour from Africa to work in the unhealthy plantations of the lower Mississippi, and the result is a large negro and **mixed** coloured population. There are also some **Chinese,** chiefly on the western coast.

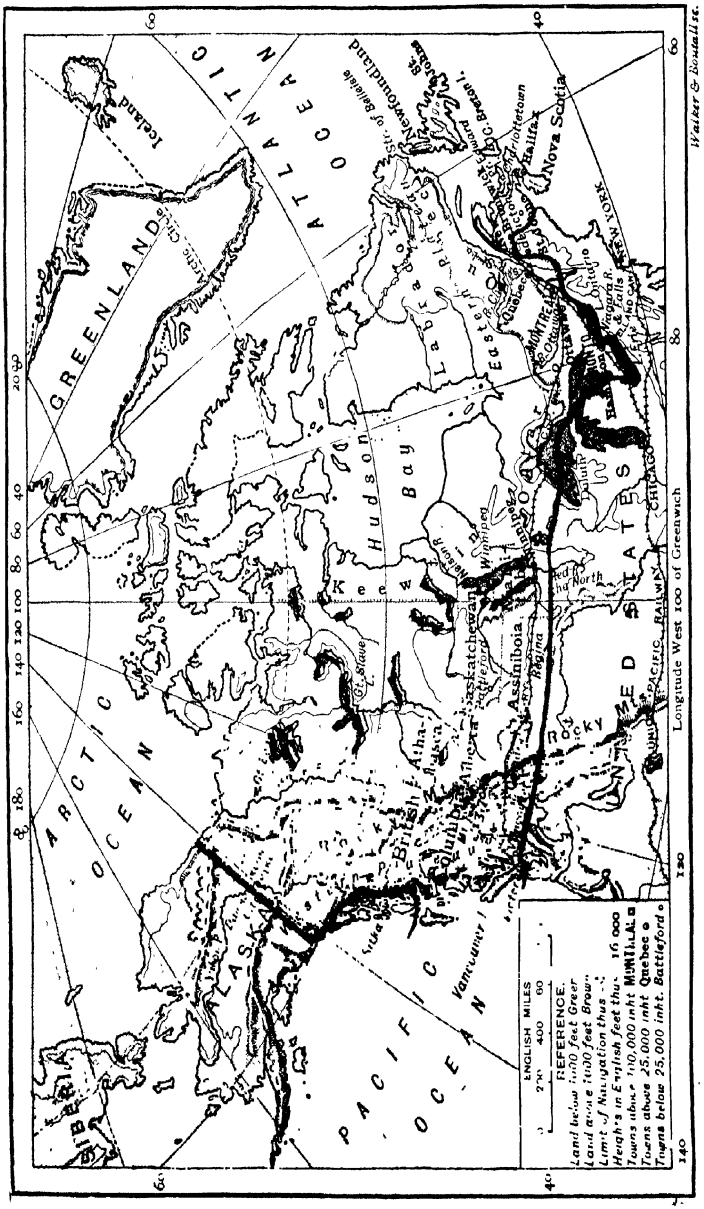


FIG. 114.—BRITISH NORTH AMERICA: PHYSICAL AND POLITICAL.

Longmans & Co. London & New York.

THE COUNTRIES OF NORTH AMERICA, WITH THEIR CAPITALS

Country		*Capital*
The Dominion of Canada	British North America	Ottawa
Newfoundland	British North America	St. John's
The United States		Washington
Mexico		Mexico
Guatemala	States of Central America	Guatemala
San Salvador	States of Central America	San Salvador
Honduras	States of Central America	Tegucigalpa
Nicaragua	States of Central America	Managua
Costa Rica	States of Central America	San José
British Honduras		Belize

BRITISH NORTH AMERICA

GENERAL DESCRIPTION.—The British dominions in North America include the whole of the continent north of the United States, except the United States territory of Alaska, in the extreme north-west, and Greenland, in the north-east, which, so far as is habitable, is Danish territory.

The area of British territory is nearly 3½ millions of square miles, or about twice as large as the Indian Empire. Much of this extends so far to the north as to be unfit for the growing of crops; and, consequently, the population of a very large district is, and must remain, very scanty. On the other hand, great areas possess fertile soil, upon which the chief European food-plants flourish freely, even the vine being successfully reared in the southern districts. This fertile portion extends along both banks of the St. Lawrence and westward, skirting the great lakes to the Rocky Mountains.

The rainfall is considerable, and the snowfall heavy over the greater part of British North America, and there is a great accumulation of water in the many large lakes which lie mostly on the plains to the east of the Rocky Mountains. The drainage from these lakes flows northwards and eastwards, forming great rivers, which afford valuable means of communication in summer, but are frozen in winter. A large part of the surface is covered with forests, which supply the timber that forms a source of great natural wealth, and are inhabited by tribes of Indians, who live by hunting fur animals.

BOUNDARIES. — **North.**—Arctic Ocean. **East.**—Atlantic Ocean. **West.**—Pacific Ocean. **South.**—The boundary is partly natural, through the middle of the great lakes, and then westwards along the 49th parallel of N. lat. to the Pacific, and eastwards by the river St. Lawrence to 45°, where it crosses to the right bank of that river, and touches the north-eastern part of the United States.

RELIEF.—The surface is mainly in three divisions:—

(*a*) The **Western Plateau,** of which the **Rocky Mountains** form the eastern boundary.

(*b*) An **Eastern Plateau,** of less elevation, which stretches from the **Labrador** coast westwards, and forms the platform upon which lie the great lakes, of which **Superior** is the chief.

(*c*) An intervening **Lowland,** with slopes to the Arctic Ocean and to Hudson Bay.

MOUNTAINS.—**The Rocky Mountains,** with **Robson Peak** 13,700 ft., and many other peaks between 11,000 and 13,000 ft.

PLAINS.—The great lowland region of British North America is varied in the character of its surface and productions. Thus, in the north are extensive districts that are frost-bound almost all the year, and produce little beyond lichens and Arctic plants. Bordering these to the south and west is a wide forest belt. To the south of the forest region lies the rich lowland of Manitoba, and westward to the Rockies are rolling treeless prairies, which are largely capable of cultivation.

RIVERS AND LAKES.—The rivers and lakes of British North America form three chief systems, which drain respectively to (*a*) the Atlantic Ocean, (*b*) Hudson Bay, and (*c*) the Arctic Ocean. The rivers of the Pacific Slope are entirely separated from these systems. Though the lakes lie at no great elevation (Superior is only 600 ft. above the sea), each system descends by a series of steps, and, consequently, most of the rivers are impeded by rapids and cataracts.

(*a*) The **St. Lawrence** drains the system of lakes which are distinguished by the name of the **Great Lakes.** These are **Superior, Huron, Michigan, Erie,** and **Ontario,** of which Huron and Michigan are at the same level. The latter is entirely in the United States.

From its extreme sources the St. Lawrence is 2,000 miles in length, but from Lake Ontario it is only 700 miles to the sea. Of the various con-

necting rivers, the most famous is **Niagara**, which flows from Erie to Ontario (33 miles), and forms in its course the great **Falls of Niagara**, over 150 ft. in height. The various rapids are avoided by canals, and large vessels can now pass from the sea to **Duluth**, a port at the western end of Superior. Many tributaries join the St. Lawrence on both banks, some of which are considerable rivers. The chief is the river **Ottawa** on the left, upon which stands Ottawa, the capital of the Dominion of Canada. Many important towns stand upon the banks of the river or connected lakes, the largest being **Montreal** and **Quebec**, the most famous in history.

(*b*) The **Nelson** is the chief river entering Hudson Bay. This river carries off the waters of some large streams that rise in the Rocky Mountains, and also of the **Red River of the North.** It drains many lakes, of which the chief is **Winnipeg.** Navigation is hindered by rapids at a short distance from the mouth.

(*c*) The **Mackenzie** is a vast stream that drains many great lakes which are fed by rivers from the Rockies. The chief lakes are the **Great Slave** and **Great Bear.**

Of the **Pacific Slope rivers**, the only one of importance in British North America is the **Fraser**, in **British Columbia**, which is of considerable length (having a circuitous course), but is very rapid and variable, and not of much use in navigation.

CLIMATE.—The differences in climate are great, British North America having over the whole of its surface a cold winter, while even in far northern districts the summer heat is considerable. The latitude of British North America corresponds to that of Siberia, but the climate is on the whole less extreme. The varieties of climate experienced are due to several causes.

(*a*) The height of the western mountain region prevents the moderating influence of the winds from the Pacific from affecting any large area. Consequently, the western coast has a much milder climate than the plains bordering upon the Rocky Mountains.

(*b*) The eastern coast comes under the influence of a cold polar current. Hence Labrador, a large district in the same latitude as Great Britain, is almost wholly unfit for European settlement. Also the estuary of the St. Lawrence, which nowhere reaches lat. 50° N., is impeded with ice every winter, and the provinces bordering upon it experience severe frost and snow.

(*c*) The great lowland region lies exposed to the cold of the Polar regions and suffers from very cold winters while, on the other hand, the absence of lateral highlands allows free play to the southern hot winds in summer. As a result of this, crops ripen very quickly, and are successfully reared in places where the summer is very short.

FERTILITY OF SOIL.—The bulk of the fertile soil lies

along the banks of the St. Lawrence, and particularly in the district lying between **Huron, Erie,** and **Ontario**; in the Gulf provinces, viz. **New Brunswick, Nova Scotia,** and **Prince Edward Island**; and in **Manitoba** and parts of the other provinces to the west of Lake Superior. The greater part of the plains to the north and east of the forest belt is barren, as are also **Labrador** and much of **Newfoundland. British Columbia** is mostly elevated, and contains only a small proportion of fertile soil, but **Vancouver Island** is productive.

As has been shown in the paragraph upon climate, a great part of the Dominion suffers occasionally from the too early approach of winter, even where the soil is naturally fertile. This makes farming risky in the north-western provinces, for, while in a favourable year excellent crops may be safely harvested, in another year severe damage may be inflicted by frosts before harvest.

PRODUCTS. 1. **Vegetable.**—**Natural.**—**Timber** covers vast districts, and is the most valuable export. **Sugar** is obtained from the juice of the maple tree. **Grass** on the western prairies affords food for many cattle, and is also converted into hay.

Cultivated.—**Wheat, barley, oats, potatoes,** and **pulse** are common throughout the Dominion, while **tobacco** and **maize** grow in the warmer parts of the province of Quebec, the **vine** in the south of the province of Ontario, and **apples** are an important product in Nova Scotia.

2. **Animal.**—The animal products may be classed as follows:—

(*a*) Products of wild animals, as **furs** from forest animals and from seals, and **oil** from the seal.

(*b*) Products of domestic animals—viz. cattle, dead meat, butter, &c. **Cheese** is an increasingly valuable product.

(*c*) Products of the **fisheries,** both in salt and fresh water.

The chief fishing grounds are in the Gulf of St. Lawrence and on the famous Banks of Newfoundland, where the **cod** is the most valuable both for its flesh and oil. Many other food-fishes—viz. **mackerel, herring,** and **lobsters**—are plentiful.

The chief fish of the rivers and lakes are the **salmon,** more particularly in British Columbia, and the white fish of the lakes and rivers of the great plains.

The value of the fisheries on the Banks of Newfoundland was discovered in the sixteenth century, and has been the cause of many disputes and treaties

between Great Britain and the United States, as also with France and other European countries.

3. **Mineral.**—Vast stores of mineral wealth exist in Canada, and they are being rapidly developed and worked. The most important products are **coal, iron, nickel, gold** found in the Klondyke district on the Yukon, Dawson City being the chief mining settlement, and **petroleum.** Many other minerals exist, and only await development.

MANUFACTURES.—Up till the present time the energy of the people of British North America has been mainly directed to the development of its great natural resources. Many mills are engaged in the production of **flour**, the conversion of **lumber** into planks and various manufactured articles of wood, and in **wood pulping** for paper manufacture. **Leather** is largely made.

TRADE.—A very active trade is carried on—

First, in the exchange of the varied products of the many provinces.

Second, in the exchange of the products of forests, farms, and fisheries for the manufactured goods of the United States and of Europe.

MEANS OF INTERNAL COMMUNICATION.—The first trade routes naturally followed the St. Lawrence and its connected lakes and streams. The difficulties caused by the occurrence of falls and cataracts have been obviated by the construction of several canals, of which the **Welland Canal** between Erie and Ontario is the chief, as it avoids the Niagara River and Falls. Large vessels of light draught, specially constructed, can now pass from the sea to the western end of Lake Superior.

There is also a considerable length of railways, the chief line being the **Canadian Pacific**, from Halifax to Vancouver.

FOREIGN TRADE.—Imports.—**Iron** and **steel** goods, **woollen** and **cotton** goods, **coal, sugar,** and **tea.** Also numerous articles of luxury and of tropical produce.

Exports.—**Timber** and **animals** (chiefly cattle) form about one-sixth of the total value.

Wheat, cheese, gold, and **dried fish** are also important.

PORTS.—On the Atlantic Coast.—Halifax, in Nova Scotia, has a great advantage over most of the other ports of the Atlantic coast and of the St. Lawrence in being generally free from ice all the year round; and it is, therefore, the winter port

of the Dominion. **St. John** (New Brunswick) also has a fine harbour and large trade.

On the St. Lawrence.—Montreal (266), on an island in the river, is the largest town in the Dominion. Formerly large vessels only reached Quebec, but the river has been deepened, and now ocean-going steamers ascend to Montreal.

Quebec (68) still has a large trade, though a variety of causes has made the city lose its place as chief port.

Lake Ports.—**Toronto** (208) is well situated upon L. Ontario, and is a town of rapidly increasing importance.

Hamilton is also a thriving port upon L. Ontario.

Pacific Ports.—**Victoria**, in Vancouver Island, is the chief port of the province of British Columbia; **Vancouver**, the western terminus of the Canadian Pacific Railway, is of rising importance.

PROVINCES AND THEIR CAPITALS.—The following provinces form the **Dominion of Canada** :—

(1) **Quebec**, cap. **Quebec**, at the confluence of the river Charles with the St. Lawrence.

(2) **Ontario**, cap. **Toronto**, on Lake Ontario.

(3) **Nova Scotia**, cap. **Halifax**, upon an excellent harbour on the Atlantic.

(4) **New Brunswick**, cap. **Fredericton**, upon the river St. John.

(5) **Prince Edward Island**, cap. **Charlottetown**, upon a good harbour on the west of the island.

(6) **Manitoba**, cap. **Winnipeg**, at the junction of the Red and Assiniboine Rivers.

(7) **British Columbia**, with **Vancouver Island**, cap. **Victoria**. A large district round Hudson Bay known as **Keewatin** has no separate government.

(8) The new provinces of **Alberta** and **Saskatchewan**, formed in 1905 out of the districts of Alberta, Saskatchewan, Athabasca, Assiniboia, &c.

Newfoundland is a Crown Colony having no political connection with Canada. With this island is included the coast of Labrador.

1. **Province of Quebec.**—This province extends along both sides of the St. Lawrence. That district which is on the right bank is the most thickly peopled. A large proportion of the province is still covered with forests, and lumbering is the chief occupation. The chief crop is oats. The main portion of the

province forms part of the plateau of Canada, and, owing to its elevation and to its northern exposure, has very cold winters.

The chief cities are **Quebec** and **Montreal.**

Quebec (68), the capital of the province, is built at the foot and on the top of bluffs forming the left bank of the St. Lawrence, and thus has a very strong position. Owing to the deepening of the river to Montreal, Quebec has not grown so rapidly in recent years as some other Canadian cities, but it is still the point of departure and arrival for passengers and has a large trade in lumber. Many of the inhabitants are French,

Montreal (266), the largest city in the Dominion, stands on a long island in the St. Lawrence, and has great trade.

2. **Province of Ontario.**—This province is about two-thirds the size of Quebec, but has a larger extent of cultivated land. The district which lies between Lakes Erie, Ontario, and Huron in the southerly portion of the Dominion has a pleasanter climate than Quebec. In addition to wheat, barley, and oats, maize and the vine are cultivated with success. The lumber industry is very important. The most valuable crop is barley, which is exported to the United States.

Toronto (208), upon L. Ontario, the capital and largest town of the province, is growing very fast. **Ottawa** (60), upon the R. Ottawa, is the capital of the Dominion, and is the centre of the lumber trade of the province. **Hamilton** is a lake port upon L. Ontario.

3. **Nova Scotia**, including **Cape Breton Island**, is extremely well situated for commerce. The natural productions are timber, with coal and other minerals, and the adjoining seas swarm with valuable fish.

Halifax (41), the capital, upon an excellent harbour, is the chief naval port for British ships in American waters, and is the winter port for the Dominion, owing to the freezing of the St. Lawrence.

4. **New Brunswick**, a hilly province, is very similar in productions to Nova Scotia.

Fredericton, upon the R. St. John, is the capital.

St. John, the same size as Halifax, is the largest town.

5. **Prince Edward Island** is a fertile island, with the densest population in the Dominion.

The capital is **Charlottetown.**

6. **Manitoba** is the northern portion of the low-lying plain which extends southward into the United States, and forms the

basin of the Red River of the North. This province has progressed with great rapidity in the last twenty years, owing to the suitability of the rich soil for wheat growing. The construction of the Canadian Pacific Railway and the development of the lake shipping have enabled Manitoban wheat to be carried swiftly and cheaply to Europe.

Winnipeg (55) is the capital and largest town.

7. **British Columbia and Vancouver Island** are together 400,000 sq. miles in area, but there is on the average only about one inhabitant to 2 sq. miles. Much of the surface of British Columbia consists of the great **Western Plateau,** which is very dry and barren. The coast ridges receive abundance of rain, and are clothed with splendid forests. Considerable quantities of gold and silver have been obtained, and coal is abundant.

8. **The North-West Territories** include vast areas between Manitoba and the Rocky Mountains, and are as yet but little developed, although it is known that extensive districts are suitable for the habitation of Europeans and the growth of cereals.

Victoria, the capital, is upon Vancouver Island.

POPULATION.—Over 5¼ millions, or about 1½ to a sq. mile.

The People.—Over five-sixths of the people are native born of British or French descent. Rather more than one-quarter of the whole population is of French extraction.

Of the European-born inhabitants the majority are from the British Isles. Native Indians number about 99,000.

History.—The French were the first Europeans to form settlements along the banks of the R. St. Lawrence and in the provinces on the south of the Gulf. When the Seven Years' War was raging the whole province of Canada was conquered, and was recognised by the French as British territory in 1763. Great progress has been made during the nineteenth century in the settlement of new districts and the formation of provinces. In 1867 all the provinces except Newfoundland were formed into the **Dominion of Canada.**

Government.—A **Governor-General** represents the British Sovereign, and he is assisted by a Privy Council and two Houses of Parliament. Each province has a Lieutenant-Governor with a Ministry and one or two Houses of Parliament. All the provinces share in the election of the House of Commons of the Dominion.

Navy.—Naval defence is maintained by the British Government, which has fleets stationed in the North Atlantic and on the Pacific Coast.

Newfoundland.—This large island lies across the entrance of the Gulf of St. Lawrence, and is separated from the coast of **Labrador** by the Strait of **Belleisle.**

The surface is varied with fertile valleys and barren uplands. The climate is influenced by an icy polar current, and, consequently, the winters are very cold. The summers are delayed by the presence in the adjoining seas of large numbers of icebergs brought down from northern regions; and fogs are common at all seasons. The natural wealth consists of **fish** (cod, lobsters, &c.) on the famous Banks of Newfoundland, **seals** on the Labrador coast, **copper ore,** and **iron pyrites** and **lumber.** The soil has been tilled to only a small extent, but the cultivated area is increasing as the fertile spots become better known. The people number about 210,000, of whom the great majority are directly connected with the fisheries.

The **exports** are the **produce of fisheries and mines**—viz. cod-fish, cod and seal oil, copper and iron, lobsters, and sealskins.

The **imports** are **articles of food,** as flour, bacon, cheese, &c., from Canada and the United States; **manufactured goods,** woollens, cottons, and canvas from Great Britain; **tropical produce,** sugar, coffee, tea, &c., from British Colonies.

The island is a Crown Colony, with a large share of self-government. The Governor, who is appointed by the British Sovereign, is aided in his functions by a Council and two Houses of Parliament.

The capital is **St. John's.**

The Bermudas.—The Bermudas are a group of numerous small islands lying nearly 700 miles to the south-east of New York. On account of their charming climate, these islands are visited by many Americans in winter.

The capital is **Hamilton.** The islands are a British Colony under a Governor, with a Council and an elected House of Assembly.

EXAMINATION PAPERS

A. 1. Show how the direction of the chief rivers of British North America is determined.

2. What provinces in British North America produce wheat, timber, gold, copper, wine, sealskins, and cod?

3 Compare the position, surface, and products of Manitoba with those of New Brunswick.

4. Give an account of the climate of British North America, with reasons as far as possible.

B. 1. Give some description of the Mackenzie and Fraser Rivers, showing how these rivers differ from each other, and giving causes.

2. Describe the water route by which goods may pass from the Atlantic Ocean to the west of Lake Superior, drawing a sketch-map.

3. Describe the position of, and say what you can of, Halifax, Vancouver, Winnipeg, Montreal, Hamilton, Toronto, St. John's, and Quebec.

4. State the nationalities which make up the population of the Dominion, showing causes for the presence of each important element.

THE UNITED STATES

BOUNDARIES AND AREA.—The boundaries of the United States are natural for a considerable distance—the **Atlantic Ocean** on the east, the **Pacific Ocean** on the west, the **River St. Lawrence** and the **Great Lakes** on the north, and the **Gulf of Mexico** and the **Rio Grande del Norte** on the south.

The **area** is **3 million sq. miles**—with Alaska 3½ millions. (Compare with British North America.)

COAST-LINE.—The east coast is much more indented than the west, the only opening on the latter being **San Francisco Bay.**

On the east are **New York Harbour**, with **New York** upon it; **Delaware Bay**, with **Philadelphia**; and **Chesapeake Bay**, with **Baltimore.**

The **Mouth of the Mississippi** is advancing rapidly out to sea by reason of the great deposit of sediment brought down by the river.

The chief island is **Long Island**, separated from the mainland by **Long Island Sound.**

RELIEF.—Beginning on the Atlantic coast and proceeding westward the surface of the United States consists of :—

1. The **lowlands** of the Atlantic Slope. This plain widens from north to south. In the north the land is hilly and not very fertile, in the south it is swampy and fertile.

2. The **highland region**, known as the **Appalachian System**, which consists of parallel chains with longitudinal valleys.

3. **Broad plains**, which stretch westward to the Mississippi. These include many of the most productive States in the Union. In the northern part are the famous Prairies, which produce great quantities of wheat.

4. The **Great Plains**, which extend for many hundreds of miles to the east of the Rocky Mountains, with a very gradual slope towards the Mississippi Valley. The rainfall over these plains is not abundant, and large areas are sterile.

5. The **Great Plateau**, which occupies most of the western half of the United States. This plateau varies in width. It is 500 miles wide near the Canadian frontier, 1,000 miles in the centre, and 600 miles wide on the Mexican frontier. Several mountain ranges traverse the plateau from north to south.

(*a*) The **Rocky Mountains**, to the east of the plateau, form the chief ridge. Several peaks are over 14,000 ft. in height.

(*b*) The **Wasatch Range**, branching off in a south-westerly direction, divides the Great Plateau into the **Great Basin** and the **Colorado Plateau**, which differ in physical character.

(*c*) The **Coast Range** lies near the Pacific, and is of moderate height.

(*d*) The **Cascade Range** in the north and the **Sierra Nevada** in the south form the western edge of the plateau.

RIVERS.—The United States possess many great and important streams, but all others are dwarfed by comparison with the mighty system of rivers which unite to form the Mississippi. The rivers can be divided into systems which correspond with the slope of the country which they drain.

1. **The St. Lawrence System.**—The rivers which flow from the United States into the St. Lawrence are chiefly useful for the power which they furnish for the working of machinery. Consequently, many lumber, flour and other mills are situated upon their banks.

2. **The Atlantic System.**—The most important streams forming this system vary in length from 300 to 500 miles, and are of great importance to agriculture, manufactures, and commerce. Most of them have falls where they leave the high land for the plain; and near these falls many important manufacturing towns have grown. The mouths of the rivers form good harbours.

The **Hudson** (325 miles) is commercially the most important of these rivers, flowing through a valley which is the most convenient trading route towards the West, and having at its mouth the great city of **New York**, with its many adjoining towns.

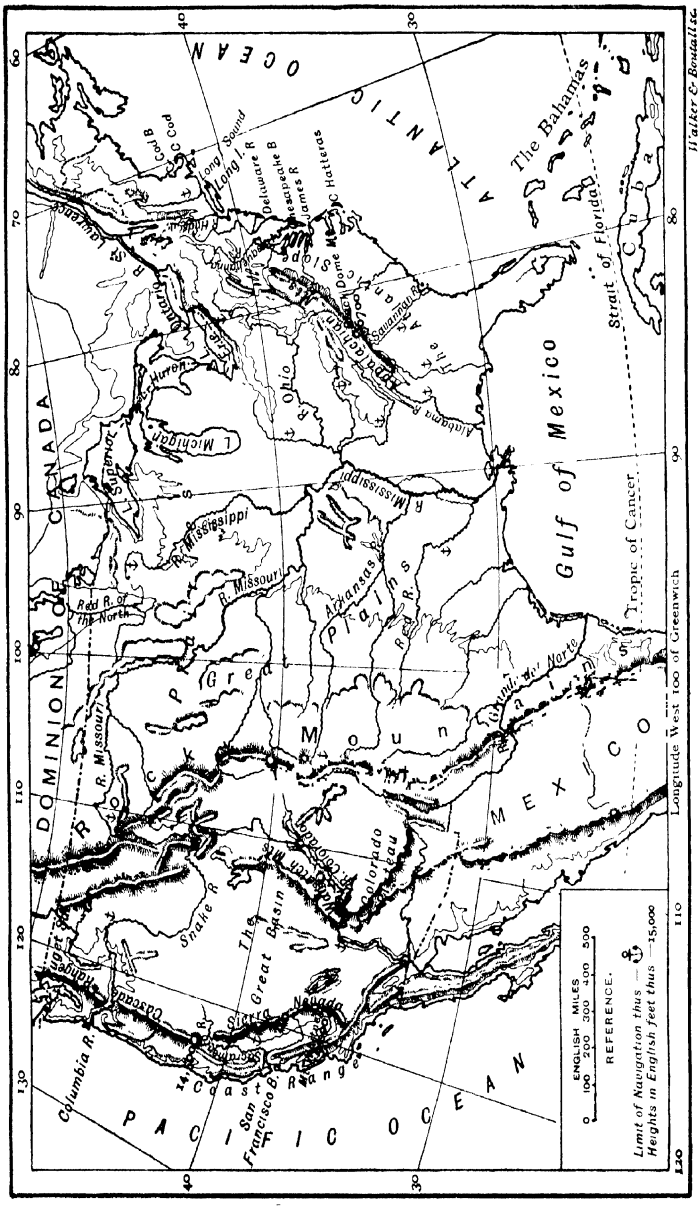


FIG. 115.—THE UNITED STATES: PHYSICAL.

Longmans & Co London & New York

Other important streams are the **Delaware, Susquehanna, James,** and **Savannah.**

3. **The Pacific System.**—The **Colorado** is of very little use for irrigation, but is navigable for about 500 miles. The banks of this river are exceedingly steep and high, reaching a height of even 7,000 ft.

The **Sacramento** is of very great importance in the irrigation of the great valley of California.

The **Columbia** drains a mountainous district, and has many falls, which furnish abundant water-power. A great industry on this river is the capture and preparation of salmon for export.

The **Mississippi** drains almost the whole of the United States between the **Rocky Mountains** and the **Appalachians**, its basin being about one and a quarter million of sq. miles. The source of the Mississippi proper is in the numerous lakes upon the plateau of **Minnesota**, and the length of the Upper Mississippi is about 1,400 miles from the source to its junction with the **Missouri.** The **Missouri** drains a region which is almost half the area of the Mississippi Basin, but the rainfall of its basin is small and the river has a less volume at its confluence than at a point nearer to its source. Another great tributary is the **Ohio**, which is almost as long as the Upper Mississippi, and has a very great volume. Below its union with the Missouri the river receives the **Arkansas** and **Red** Rivers on the right bank. The Lower Mississippi flows through a valley which, for a considerable distance on each side, is below the level of the river, and is consequently subject to floods. The total length from the source of the Missouri to the Gulf of Mexico is over 4,000 miles. **Into the Gulf of Mexico** there also flows the **Rio Grande del Norte** (Great River of the North), which comes from the Great Plateau and has a course 1,400 miles in length.

CLIMATE AND RAINFALL.—Generally speaking, the West Coast States have a more equable climate than those of the East, while the Northern States naturally have colder and longer winters than those in the South. This latter difference is not so great as might be supposed from the fact that the greatest distance from north to south is nearly 2,000 miles.

FERTILITY OF SOIL.—There is a very great extent of fertile soil in the United States, the bulk of it being in the basin of the Mississippi. The Great Plateau, for reasons stated previously, is very barren, and only a very small proportion of its surface is tilled. The States of the Atlantic Slope contain much fertile soil, particularly those south of New York. The great Western plains suffer from scarcity of rain, but they produce nutritious grasses, upon which vast herds of cattle are fed. The prairies of the North generally have a good rainfall, and produce large crops of cereals.

PRODUCTS.—1. **Agricultural.**—The most valuable crop is **maize**, which is exceedingly widespread, but is grown most extensively in the Central States. **Hay, wheat, oats,** and **cotton** are all of very great value. Wheat is very widely grown, but is the main crop in the Northern States, more particularly those to the west of Lakes Superior and Michigan. Oats are largely grown in the moister regions, where wheat would not flourish so well. **Cotton** is the chief crop in the States bordering upon the Gulf of Mexico, as well as in the southern half of the Atlantic States. Other important crops are **barley, rye,** and **buckwheat, tobacco, potatoes,** and **fruits.** The most important fruit States are Florida, where the orange is abundant; California, which produces many varieties, especially grapes, apricots, and oranges; and the New England States, where apples are very plentiful.

Forest Products.—When the United States were first settled by Europeans, dense forests extended from the Atlantic Ocean across the Appalachian Mountains and westwards towards the Mississippi. A very large area is still covered with forests, but the quantity of timber cut down yearly is enormous, and the planting of trees is now widely carried on. The most common trees are **pines** and **firs**, with various kinds of cedars, hickory, and walnut.

The forests on the Cascade Range are remarkably fine, and the lumber industry has become very important there in recent years.

2. **Minerals.**—A list of the minerals worked in considerable quantities in the United States includes almost all the important minerals used by man.

Coal, iron, silver, gold, lime, petroleum, building-stone, copper, and **lead** take first rank, and besides these there are many others.

Speaking generally, it may be stated that the precious metals are worked to the west of the Mississippi, and the other minerals to the east of that river.

Thus, gold, silver, and quicksilver are found in the mountains of the Great Plateau, especially in the States of California and Nevada.

Coal, iron, lime, petroleum, &c., abound in the northern section of the eastern half of the United States. Alabama and Georgia, further to the south, have valuable coal and iron deposits.

The **Alleghany coalfield** is of great extent, stretching from the State of Pennsylvania to Alabama.

The States in which mineral oil abounds are also rich in **natural gas**, which issues from the soil, and is largely used for heating and lighting.

Vast quantities of coal are now annually saved in the States of Pennsylvania, Ohio, and Indiana by the use of this gas.

Copper exists in great quantities near Lake Superior, especially in the peninsula between that lake and Michigan.

In **Pennsylvania**, the chief **iron-producing** State, the iron ore has largely to be brought from a distance; but in **Alabama** the town of **Birmingham** lies in a district where coal, iron ore, and lime abound together, and hence a great iron industry has sprung up.

3. **Animal Products.**—In the United States the produce of wild animals has diminished with the development of the country, and the only important products are the furs and oil of the seals which are hunted on the coast and islands of Alaska.

From domestic animals—viz. **cattle, sheep**, and **swine**—the produce is exceedingly valuable, furnishing not only abundance for home consumption, but large quantities for export. Thus, **meat**, especially fresh and cooked beef, live cattle, lard, bacon, hides, &c., are exported to European markets.

4. **Fisheries.**—The adjoining seas, as well as the lakes and rivers, abound with valuable food-fishes, and their capture and preparation employ large numbers of persons.

MANUFACTURES.—The earliest manufacturing industries in the United States were those connected with the preparation of natural produce for home and foreign markets, as **lumber, flour, meat**, and **fruit**. **Lumber-mills** for the sawing and manufacture of timber are numerous in the forest regions, especially where water-power is handy. **Flour-milling** is extensively carried on at **Minneapolis** and **St. Louis**, on the Mississippi, and at other places to which the grain can be conveniently carried.

Meat curing and packing is a very important industry at Chicago and Cincinnati. **Fruit-canning** is very largely carried on at San Francisco.

Other important manufactures are **iron** and **steel, textile fabrics**—viz. **cotton** and **woollen clothing**—**leather** and **leather goods.**

Iron and **steel** are wrought and manufactured into all kinds of machinery, rails, tools, &c., at many places, but chiefly at **Pittsburg** and **Birmingham.**

The **textile** manufactures, **clothing**, and **leather** are mostly carried on in the North-eastern States—*i.e.* those to the north of Philadelphia.

TRADE.—Owing to the great variety and amount of the products of the forests, farms, mines, and waters, there is a large surplus for export, and there is also a large demand for manufactured goods from Europe and for tropical produce. The home demand grows so fast that the exports do not increase so rapidly as the imports. The growth of manufactures in the United States causes a greater consumption of raw materials, and tends to make the country more self-supporting.

MEANS OF INTERNAL COMMUNICATION.—The railway system is remarkably extensive, a network of lines running from Atlantic to Pacific. The railways crossing the Rockies and the Great Plateau are all marvels of engineering skill. By rivers and lakes many thousands of navigable waterways are available, though these suffer in all the Northern States from frost in winter, and in the hotter and drier States from drought in summer. A very great number of steamers and other vessels are engaged in this traffic.

FOREIGN TRADE.—**Imports.**—**Sugar, coffee,** and **molasses, chemicals, woollen goods,** and **silk** manufactures are the most important; but, besides these, there is a great variety of raw materials for manufactures, as raw silk, hides and skins, flax and jute, and india-rubber; also manufactured tinplates for canning meat, fruits, &c., tea, and tropical produce.

Exports.—**Raw cotton** (nearly one-third of the total value), **breadstuffs, provisions,** beef, bacon and hams, butter, cheese and lard, **mineral oils, animals** (cattle chiefly), manufactured **iron** and **steel** (particularly machinery), **wood** and its manufactures, and **tobacco.**

The foreign trade is mostly with the United Kingdom, Germany, British North America, the Netherlands, and France. The United Kingdom takes almost one-half of the exports, and sends about one-fifth of the imports.

SEAPORTS.—The following six towns are the most important seaports:—**New York, Boston, Philadelphia, Baltimore, New Orleans,** and **San Francisco.**

Of these, New York carries on just over one-half of the total foreign commerce.

The four first-named export and import a great variety of produce and manufactured goods.

New Orleans chiefly exports cotton. **San Francisco** exports wheat and canned goods, and imports British and other manufactured goods.

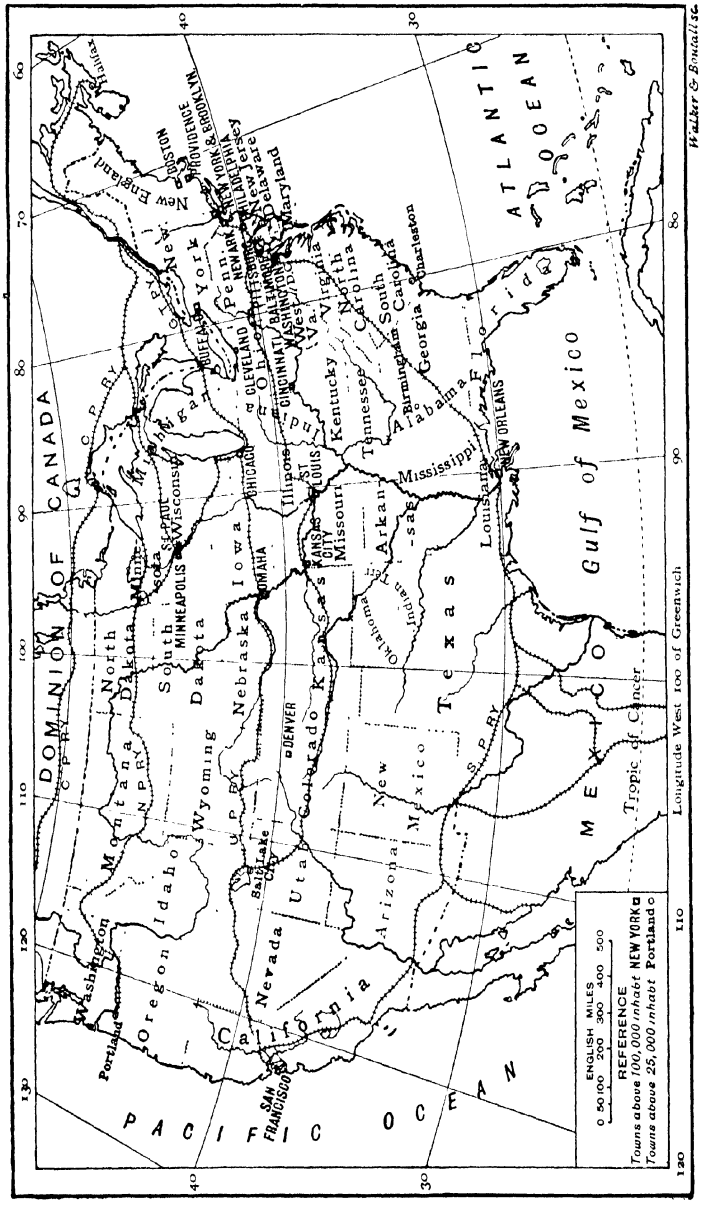


FIG. 116.—THE UNITED STATES: STATES.

INTERNAL PORTS.—The trade of the great lakes and the rivers is connected with many towns on their banks, the chief being **Chicago**, on L. Michigan; **Buffalo**, on L. Erie; **St. Louis**, on the Mississippi, with numerous steamers and barges plying to New Orleans and other cities.

POLITICAL DIVISIONS.—The United States now consist of 45 States, 4 Territories, the so-called Indian Territory, including the District of Columbia (in which **Washington**, the capital of the whole country, is situated), and the great territory Alaska.

The six territories are thinly peopled regions in the western half of the country. In each territory the Governor and Judges are chosen by the President of the United States, but the States elect their own.

For convenience, the States may be considered in the following divisions:—(*a*) **Atlantic States**, further divided into north and south; (*b*) **Central States**, also north and south; (*c*) **Western States.**

Such self-explanatory names as Gulf States, Lake States, and Pacific States are also in common use. The term **New England** is applied to the six States in the north-east, bounded by New Brunswick, the State of New York, and the Province of Quebec.

TOWNS.—(*a*) **In the Atlantic States.**—These States are the most densely peopled, particularly the northern section, where manufacturing industries are very important. The towns are mostly situated either at points favourable to commerce, as upon navigable rivers or estuaries, or where the fall of rivers from high to low land causes water-power to be available for working machinery.

New York (including Brooklyn, 3,437,000), situated between the mouth of the Hudson and the channel between the mainland and Long Island, has a splendid harbour and is excellently placed both for home and foreign commerce. Opposite the eastern side of New York is the city of **Brooklyn**, connected with it by a magnificent suspension bridge. Upon the western bank of the Hudson lie several rising towns. The whole group of cities, with New York, has a population of nearly 3½ millions, and forms practically one great city. Many industries are carried on in these towns.

Philadelphia (over 1¼ million), on the river Delaware, covers a great extent of ground and has many important manufactures. Ocean vessels reach this port.

Boston (560), upon Massachusetts Bay, is a handsome city, with much commerce and many manufactures. Near by is Plymouth, where the

Pilgrim Fathers landed, and within a short distance lie several manufacturing towns.

Baltimore (508), upon an arm of Chesapeake Bay, is an important seaport.

Buffalo (352), upon Lake Erie, is a very important port, where produce conveyed down the great lakes is transhipped for New York and conveyed by the Erie Canal and Hudson River.

Washington (278), in the District of Columbia, is the capital of the United States.

(*b*) **In the Central States.**—These States form the chief part of the great Mississippi Basin, and in them is produced the bulk of the **cotton, corn, wheat,** and **meat** raised in the country, as well as numerous other products, both vegetable and mineral. Enormous quantities of produce are collected at favourable points, as **Chicago, St. Paul, St. Louis,** and **Kansas City,** and conveyed either by rail to the Atlantic ports or by the Mississippi to New Orleans.

Chicago (1,698), upon the south-west of **Lake Michigan,** is a great lake-port and a centre from which railways diverge in all directions. Its excellent situation for the collection of produce from the western prairies has caused this city to grow at an exceedingly rapid rate. Great quantities of canned meat are sent to all parts of the world.

St. Louis (575), upon the Mississippi, near its confluence with the Missouri, resembles Chicago in the nature of its industries and commerce, as does also **Cincinnati** (325), on the Ohio **Cleveland** and **Pittsburg** have already been referred to as iron and steel manufacturing towns.

New Orleans (287), near the mouth of the Mississippi, since the deepening of the chief mouth, is reached by large vessels at any time, and has great commerce. The produce of the Mississippi Valley is conveyed in steamers and barges down the river and there transhipped. The city suffers in health from being below the level of the river.

Minneapolis (203) and **St. Paul** (163), in Minnesota, are situated close together upon the Mississippi, the former having a great many flour-mills and the latter being a commercial centre.

San Francisco (342) is situated upon an excellent harbour and has a very equable climate. This city has railway or steamboat communication with all parts of the Western States, and is the chief port for the export of the wheat, fish, fruits, &c., there produced. A large trade with Europe is carried on by sailing vessels round Cape Horn. There are numerous manufacturing industries. The city has many Chinese inhabitants.

Denver (138) is the largest and the chief of the many towns that have arisen on account of the mining industries in the Rocky Mountains.

Salt Lake City (53), the capital of Utah, is surrounded by a district which has been rendered very fertile by irrigation, through the industry of the Mormons.

POPULATION.—In the year 1900 the population was 76 millions, or 21·7 to a square mile.

The **people** are mainly of British extraction, but many European nations are represented, the next in number being Germans and Norse. Coloured people, descended from the Negro slaves, number 9 millions; and there are about 267,000 Indians and over 119,000 Chinese. Chinese are no longer admitted to the States.

GOVERNMENT.—The States form a **Federal Republic** Each State has its own Governor and Legislature, and may make laws affecting its own inhabitants only. At the head of the United States Government is the President, who is elected by the people. He is aided in his functions by a Congress of two Houses, chosen by the States according to their population.

Alaska, having an area of over half a million square miles, is a mountainous territory, watered by the **Yukon.** This country has a climate remarkably milder than eastern districts in the same latitude. The chief products are **furs,** fish, and timber. The chief town is **Sitka,** with rather over 2,000 inhabitants.

FOREIGN POSSESSIONS.—**Porto Rico** in the W. Indies. The **Philippines, Ladrones,** and one of the Caroline Group in the Eastern Archipelago, taken from Spain in 1898. **Hawaii** also annexed in 1898 Tutuila and other Samoan Islands.

EXAMINATION PAPERS

A. 1. Describe from east to west the nature of the surface of the United States, naming the mountains, plains, and plateaux.

2. Describe the coast from Cape Cod to the mouth of the Mississippi, naming the chief physical features

3. Draw a sketch-map of the Mississippi, inserting the chief tributaries and towns, and indicating clearly the watersheds.

4. What articles of commerce are dealt with at the following ports: New York, Chicago, San Francisco, and New Orleans?

B. 1. Describe the Rocky Mountains, showing position, direction, height, and naming any connected ranges, together with highest peaks

2. Show how the climate of the United States affects the vegetable products, and indicate the districts in which the most important crops are chiefly grown.

3. Name some of the chief imports and exports of the United States.

4. Give some account of Boston, Washington, Brooklyn, Buffalo, St. Louis, and Kansas City.

C. 1. Name the chief mineral products and the States in which they are worked.

2. What are the political divisions of the United States, and how are they governed?

3. Name the races most numerous in the United States, and show how they are distributed; also account for the presence of each.

4. What do you know of the position and nature of the Sierra Nevada, Colorado River, The Prairies, Long Island, and Hudson River?

MEXICO AND CENTRAL AMERICA

PHYSICAL

POSITION.—Between the southern border of the United States and the narrow isthmus known as **Panama** or **Darien** lies territory to the extent of nearly a million square miles. Four-fifths of this forms the great republic of **Mexico**; the remaining portion is made up of the five republics which are known unitedly as **Central America.** A small strip on the east coast is a British colony, and is known as **British Honduras.**

The Isthmus of Panama is included in South American territory.

COAST-LINE.—The coast-line is rocky on the west, with good harbours and deep water near the coast; but it is low and fringed with islands on the east, where the water is shallow and the harbours poor.

On the west, the peninsula of Lower California, terminated by **Cape San Lucas,** is separated from the mainland by the narrow **Gulf of California,** which is almost like an estuary of the river Colorado.

On the east are two great sea openings—the **Gulf of Mexico** and the **Caribbean Sea,** which are separated by the peninsula of **Yucatan** and the island of Cuba. North of this Peninsula **Campeachy Bay** forms part of the Gulf of Mexico, and south of it the **Gulf of Honduras** is an arm of the Caribbean Sea.

RELIEF.—On each coast a narrow coast-strip borders a high **plateau,** which occupies almost all the country, and is crossed from north to south by great mountain ranges. The only considerable plain is that of the peninsula of **Yucatan.**

MOUNTAINS.—The mountains have the general name of **Cordilleras,** a term which may be compared with that of 'Alps' in Europe.

Mt. Popocatepetl (18,000 ft.) is the highest.

LAKES AND RIVERS.—In Mexico the chief lake is **Tezcuco,** having the city of Mexico upon its western side.

In Central America Lake **Nicaragua** is the largest lake, and is drained by the river **San Juan.**

The rivers of Mexico are generally short, and are of very little use in navigation, owing to the falls where they leave the plateau in their course to the sea.

CLIMATE AND RAINFALL.—Along most of the coast and in Central America the climate is **tropical,** with great heat at all times and heavy rainfall in the wet season. Upon the **Plateau of Mexico** the summer is very hot, and rain falls heavily in the lower parts, while the winter is dry and subject to cold winds. The rainfall over the greater part of the region is not sufficiently abundant for successful agriculture.

FERTILITY.—The soil is very fertile in most of the coast regions and throughout Central America generally. Large districts on the Mexican Plateau and in the plain of Yucatan suffer from drought, and produce only a scanty vegetation, chiefly of the cactus order.

Considerable tracts have been made productive by water brought along great aqueducts to irrigate the soil.

PRODUCTS.—1. **Agricultural.**—Almost every kind of crop can be grown in Mexico or Central America. Tropical plants flourish on the lowlands, while those of the warm and cold temperate regions are produced at different elevations. The slopes of the mountains bordering the plateau and the coast-lands are largely covered by forests, which produce much exceedingly valuable timber. Even the fibrous plants of the dry plains produce a fibre-like hemp, which is largely used for packing-cloth, bags, &c.

Mexico.—The chief crops are maize, wheat, and barley. Other products are cotton, sugar-cane, henequen, or hemp, coffee, tobacco, and maguey (yielding **pulque,** the favourite Mexican drink).

Central America.—Here the vegetation is tropical, and very

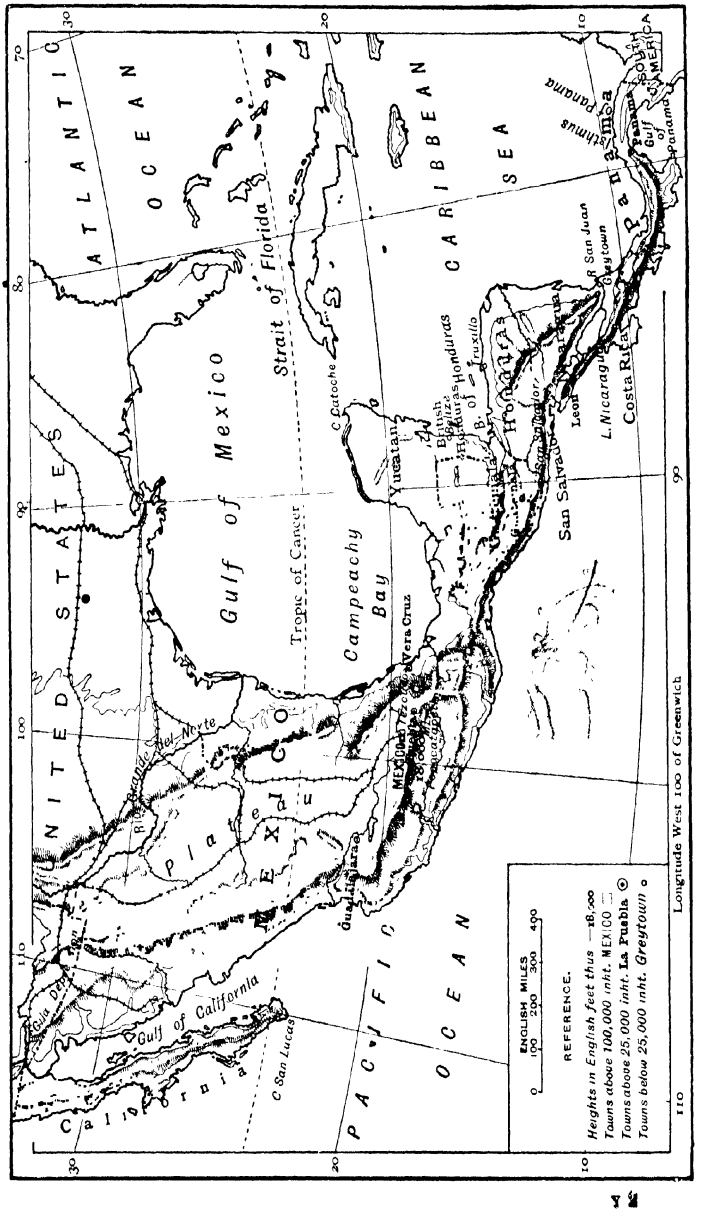


FIG. 117.—MEXICO AND CENTRAL AMERICA: PHYSICAL AND POLITICAL.

varied—sugar, bananas, cacao, tobacco, vanilla, maize, rice, coffee, cotton, and indigo are all cultivated.

The **forest products** are chiefly mahogany, india-rubber, and logwood.

2. **Mineral.**—Both Mexico and Central America are very rich in minerals, nearly every mineral being found, and many in great abundance. Owing to several causes, of which the chief has been the bad roads and defective means of communication, the mines have not been well developed. The chief product is **silver**, of which very large quantities have been obtained for centuries. **Lead, copper**, and **gold** are also successfully worked.

3. **Animal.**—Sheep, cattle, goats, and horses are numerous, both in Mexico and Central America, especially in the north.

MEXICO.—POLITICAL

MANUFACTURES.—Cotton goods are now produced in increasing amount.

TRADE.—Since the construction of the railways from the coast to the plateau in recent years, Mexico has carried on an active trade with the United States, the United Kingdom, and other countries. The Mexican railways are remarkable for their great elevation and steep slopes.

Imports.—Manufactured goods, chiefly cotton, linen, and woollens, iron goods and machinery, and leather.

Exports.—Silver, henequen, coffee, lead, hides, wood, and tobacco are the most valuable.

SEAPORTS.—**Vera Cruz** (24), upon the Bay of Campeachy, is the chief port, and is the outlet for the most thickly peopled part of Mexico.

TOWNS.—**Mexico** (330), upon Lake Tezcuco, is the capital and by far the largest city. It is an old city, having been founded by the Aztecs, who inhabited the country previous to its conquest by the Spaniards. **Guadalajara** has 83,000 and **Puebla** has 88,000 inhabitants.

POPULATION.—Twelve millions, or 16 to a square mile.

The population is unevenly distributed, very large districts in the north having but few people.

PEOPLE.—About one-fifth are whites of Spanish origin and the remainder either of pure Indian or mixed race. All have equal privileges in political matters.

GOVERNMENT.—As in the United States, the various States of Mexico form a Federal Republic. Each State controls its local affairs, whilst national concerns are controlled by a Congress of two Houses, with a President elected for four years.

CENTRAL AMERICA.—POLITICAL

The six States which are collectively known as Central America are, in the order of size, **Nicaragua, Guatemala, Honduras, Costa Rica, San Salvador,** and **Panama.**

They vary in size greatly, the first three being between 40,000 and 50,000 sq. miles in area, and the last only just over 7,000 sq. miles. Costa Rica is 23,000 sq. miles.

POPULATION.—The total population is nearly 3¼ millions.

This is very unevenly distributed, for **San Salvador** has a total of over three-quarters of a million and an average of nearly 110 per square mile; while the average of **Nicaragua** and **Honduras** is only about 8 per square mile.

COMMERCE.—**The Imports** are mostly manufactured goods from the United States, the United Kingdom, Germany, and France, and of **exports coffee** is the most valuable, **bananas, silver,** and **cattle** being next in importance.

SEAPORTS.—There are many small ports upon the Atlantic coast, but they nearly all suffer from sand-banks, obstructing the passage of vessels. The chief are **Truxillo, Greytown,** and **Panama.**

TOWNS.—**Guatemala** (70) is the largest town in the Central American States and is the capital of the Republic of the same name.

Leon (25), the old capital of Nicaragua, like **San Salvador,** has suffered much from earthquakes.

The whole of Central America and a large part of Mexico are very subject to disturbances of the earth's crust, often with disastrous results.

British Honduras is a British Crown Colony on the west side of the Bay of Honduras, and consists of a coast-strip with an area of 7,500 sq. miles. It is very unhealthy for Europeans, but is very valuable on account of the forests of **mahogany** and **dyewoods,** which are the chief wealth of the colony, and are largely exported.

The chief town, **Belize,** is the only port with a good harbour on a long stretch of coast-line.

THE WEST INDIES

GENERAL DESCRIPTION.—The term West Indies comprises the very numerous islands which lie in the North Atlantic Ocean between North and South America. They vary in size from mere rocks and islets to the island of Cuba, which is nearly twice as large as Ceylon.

Most of these islands have been formed by volcanic action, and are mountainous; but the Bahamas, a very extensive group, are of coral formation.

Their fertility and beauty have caused the West Indies to be much desired by European Powers; and, consequently, with the exception of Hayti and Cuba, all the islands are European Colonies.

The name 'West Indies' was applied because of the impression of Christopher Columbus that he had reached the islands to the south-east of India.

CLIMATE.—Tropical, but tempered by cooling sea-breezes. There are two seasons, wet and dry. The rainfall in the wet season is frequent and very abundant, with severe thunderstorms.

PRODUCTIONS. The wealth of the West Indies is almost entirely vegetable. Minerals are but little worked, and animal food is largely imported.

Vegetable.—Almost every tropical crop is produced, either for home consumption or for export. The most valuable are **sugar, tobacco, cacao, coffee, spices,** and **fruits,** such as pineapples, limes, bananas, oranges, and coco-nuts. **Yams** and other roots are largely grown and consumed by the Negroes.

DIVISIONS.—(*a*) The **Greater Antilles,** consisting of Cuba, Jamaica, Hayti, and Porto Rico.

(*b*) The **Lesser Antilles,** consisting of the Leeward and Windward groups.

(*c*) The **Bahamas.**

HOW OWNED.—**Hayti** is divided into two important republics. The remaining islands (except **Cuba,** which is now independent) are colonies of the following nations: 1. The United States. 2. Great Britain. 3. France. 4. Holland. 5. Denmark.

The United States own **Porto Rico.**

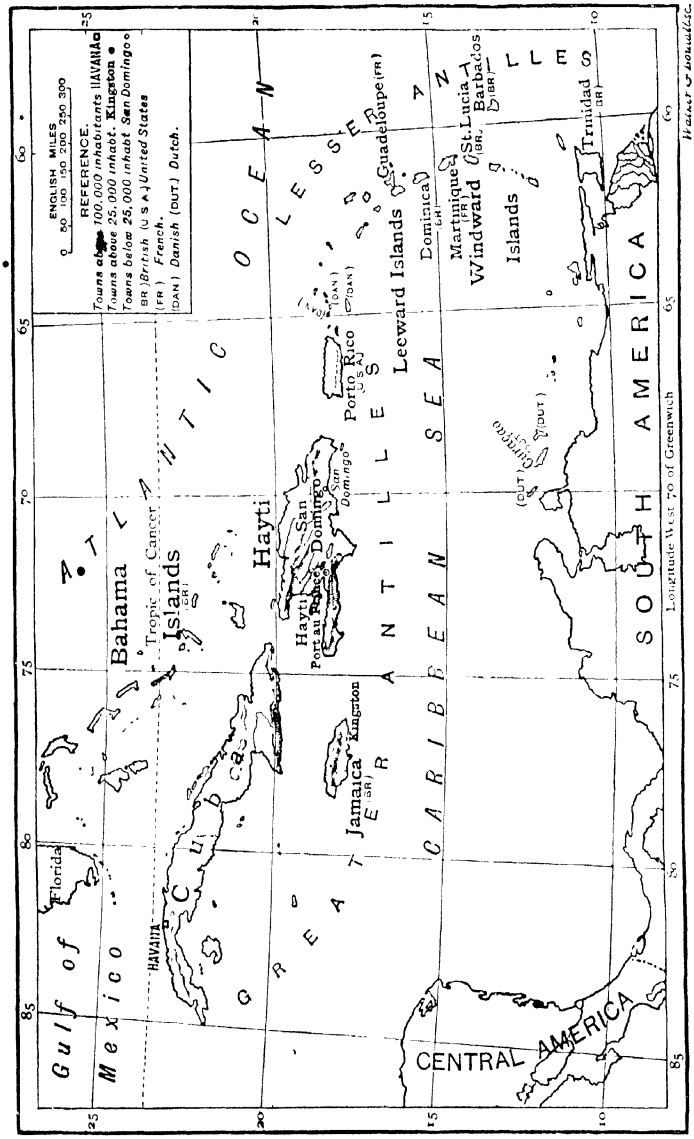


FIG. 118.—THE WEST INDIES.

Longmans & Co. London & New York.

Great Britain owns **Jamaica,** the **Bahamas,** and more than a dozen other important islands, of which **Trinidad, Dominica, Barbados,** and **St. Lucia** are the largest.

France owns **Guadaloupe** and **Martinique** and some smaller islands.

The chief **Dutch** island is **Curaçao.**

Denmark owns three small islands.

COMMERCE.—**The imports** are manufactured goods and various food substances, such as meat, salt fish, rice, and flour, and the **exports** are the products of the plantations, especially **sugar,** with rum and molasses, **coffee, tobacco,** and **fruits.**

TOWNS.—**Havana** (235), the capital of Cuba, is the largest town in the West Indies, and is an important seaport. It has a large Spanish population, and is chiefly famous for the manufacture of cigars.

Port-au-Prince and **San Domingo,** in Hayti; the former the capital of Hayti Republic, the latter of San Domingo.

Kingston (47), the capital of Jamaica, possesses a good harbour.

POPULATION.—The population is about five millions, and the people consist of various Europeans, Negroes and half-castes, and Asiatic coolies who are imported to work on the plantations. The Negroes form the great bulk of the population.

EXAMINATION PAPERS

A. 1. Describe the surface of Mexico and show the effect of the relief upon the climate.

2. Name the States of Central America, and say what you can of their people and government.

3. Name the animal, vegetable, and mineral products of Mexico, and indicate the localities in which they are most abundant.

4. Draw a map of Central America, and show the position of each of the States and also of Yucatan, Lake Nicaragua, Popocatapetl, Vera Cruz, and Truxillo.

B. 1. State the divisions, natural and political, and the position of the West Indies.

2. Give some account of British Honduras, stating its position, size, products, climate, and chief town.

3. Mention any circumstances that have contributed to the growth of Mexican commerce; name the principal exports, and the countries with which the foreign trade is chiefly carried on.

4. Compare and contrast the West with the East Indies in as many respects as you can.

SOUTH AMERICA

GENERAL DESCRIPTION.—In shape and configuration South America bears a remarkable resemblance to North America (*see* page 312), but in position and climate it bears a general similarity to the continent of Africa. The latter continent extends over 72 degrees of latitude; South America extends over about 67 degrees. In South America, the Equator lies to the north of the line of greatest breadth, in Africa it lies to the south of it. The great protuberance to the east of South America lies almost exactly opposite the great indentation to the west of Africa. Both continents have a very regular outline, the proportion of coast-line to area in each case being very small. Considering the fertility of the soil over the greater part of the area, the population of South America is small, being under 40 millions or less than 6 to the square mile.

POSITION.—From about 12½° N. lat. to 54° S. lat.

The great bulk of the continent is within the tropics.

BOUNDARIES.—**East,** the **Atlantic Ocean. North,** the **Caribbean Sea. West,** the **Pacific Ocean.**

SIZE.—**Greatest length,** 5,400 miles. **Greatest breadth,** 3,200 miles.

Area.—7,000,000 sq. miles.

COAST-LINE.—Although the coast-line of South America is, on the whole, remarkably regular, the east coast differs from the west. To within a few miles of the southern extremity, the west coast shelves down rapidly to a great depth. While the ocean bordering the east coast is, on the other hand, comparatively shallow, and sand reefs and salt lagoons fringe the shores at intervals. Nearly all the islands are in the south, and the west coast of Patagonia resembles the coast of Norway with its fjords and innumerable islands.

Openings.—The most important openings are the great river mouths—viz. **Amazon, Orinoco,** and **La Plata.** The **Gulf of Maracaybo,** in the north, is connected with **Lake Maracaybo** by a narrow strait. The Gulf of **Guayaquil** is the chief opening on the west. The **Strait of Magellan,** in the far south, is the channel between Tierra del Fuego and the mainland. The

harbour of **Rio de Janeiro** is considered to be one of the finest in the world.

CAPES.—North.—Point Gallinas, the most northerly.

East.—Branco, the most easterly.

South.—Froward, the most southerly on the mainland ; **Horn,** on a small island, the extreme southerly point.

West.—Parina, the most westerly.

ISLANDS.—The **Falkland Islands,** a group consisting of two large and many small islands, lie 300 miles east of the Strait of Magellan, and form a British colony.

Tierra del Fuego, a large island south of the Strait of Magellan.

The **Fuegians,** or **Canoe** Indians, are a very degraded race, much inferior in size to the **Patagonians** or **Horse** Indians. Their dwellings and boats are very rude, and their food consists of shell-fish, sea-birds' eggs, and fish. They live almost always in their boats.

The **Galapagos** Islands, 600 miles to the west of Ecuador, and situated exactly upon the Equator, belong to the Republic of Ecuador.

RELIEF.—The general slope of the surface is from the high ridge of the Andes in the west towards the east. In the eastern half of Brazil the surface is varied by a succession of ranges connected by upland plains. There is also a highland region in the north running east and west and forming the northern boundary of the Amazon basin.

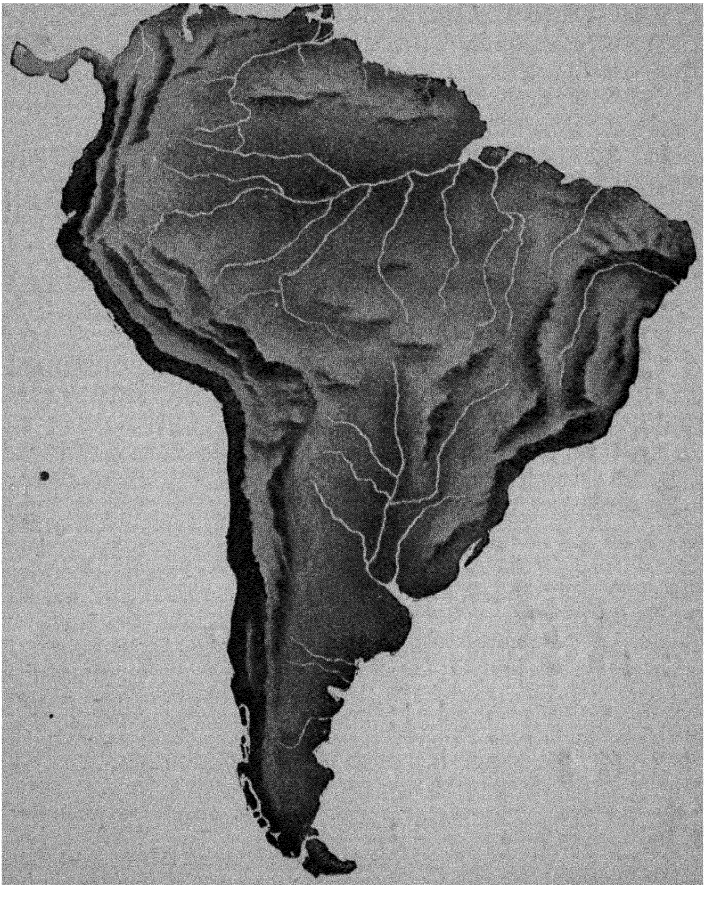
MOUNTAINS.—The **Andes** form the southern portion of the great chain which traverses America from the Behring Sea to Cape Horn. From the north-western corner of South America, proceeding southward, the range consists—first, of three parallel chains, next of two chains, and lastly of one line of peaks. Between the chains of the Andes lie very high tablelands. Throughout the whole length the western coast-strip is narrow, in places remarkably so. The highest peaks are **Aconcagua,** 23,000 ft. ; **Sorata** and **Chimborazo,** both over 20,000 ft. Many of the Andes are active volcanoes.

The **Brazilian** Mountains consist of numerous ranges, mostly from north to south, of a height ranging to about 7,000 ft. or 8,000 ft.

The **Northern** Mountains are of considerable height; but,

owing to the dense vegetation clothing their sides, they are difficult to explore, and little is known of them.

FIG. 119 —SOUTH AMERICA: RELIEF



PLATEAUX.—The **tableland** of **Titicaca** is a large tract of very high land bordered by two ranges of the **Andes** in about the middle of the system.

The **Campos** of Brazil are the uplands which connect the various ranges of mountains of that country, and ascend with increasing elevations from the coast to the inland parts.

PLAINS.—The **Llanos** are the low-lying plains which form the great part of the basin of the Orinoco.

The **Selvas** are the forest plains, which extend for hundreds of miles upon either side of the Amazon.

The **Pampas** are wide grassy tracts, occupying the southern portion of the Argentine Republic.

The **Great Shingle Desert** fills up a large part of Patagonia, and is very barren.

Land fit for cultivation lies to the east along the coast, and to the west at the foot of the Andes.

RIVERS.—Owing to the slope of the land, all the large rivers flow to the north or east coasts.

The **Amazon, La Plata,** and **Orinoco** are the chief.

The **Magdalena,** in Colombia; **Essequibo,** in British Guiana; **San Francisco,** in Brazil; and **Negro,** in Argentine Republic, are also long and important streams.

The **Amazon** drains a basin half as large again as the Indian Empire, and its main stream forms a waterway of great width and depth, affording an easy channel for nearly 3,000 miles from the sea. The numerous great streams which unite to form the Amazon flow from the **Andes**, the **Brazilian Mountains**, and the **Northern Mountains**, and many of them are very important rivers in themselves. The chief tributaries on the right bank are the **Madeira** and **Tocantins**, the latter flowing into the **Para Mouth**. On the left bank the chief tributary is the **Negro.**

In the rainy season boats can pass from the **Negro** to the **Orinoco.**

The **La Plata** is really only an estuary formed by the waters of the **Parana** and **Uruguay**. The **Parana** receives the **Paraguay**, which rises at a distance of 2,300 miles from the estuary. These rivers, with their many tributaries, afford means of conveying goods to and from the coast; but the shallowness of the estuary is a serious hindrance to the passage of large vessels.

The **Orinoco** is about 1,200 miles in length, and is navigable for 1,000 miles.

By its annual floodings in the rainy season the **Llanos** are fertilised, and made to produce a very abundant vegetation, which dies off under the great heat and drought of the dry season.

LAKES.—South America has remarkably few lakes. **Lake Titicaca,** upon the plateau of the same name, is the largest.

FIG. 120.—SOUTH AMERICA: PHYSICAL.

Longmans & Co. London & New York.

CLIMATE AND RAINFALL.—The greater part of South America is within the tropics, and has a hot climate, though a great variety of climate is experienced even on and near the Equator, owing to the elevation of large portions of the surface. Thus **Quito,** upon the Equator, enjoys perpetual spring. The narrow southern portion suffers from severe winters. The rainfall is abundant over most of the surface. It is deficient in the neighbourhood of the Tropic of Capricorn, on the plains of the Argentine Republic, and along the middle section of the western coast-strip.

PRODUCTS.—The vegetable, animal, and mineral products are all of much importance.

1. Of the **natural** products, some of the most valuable are hard woods such as **mahogany,** dye-wood as **logwood,** and **Peruvian bark** ; and **manioc,** the plant from which tapioca is obtained.

Crops.—In **Brazil** and the **Northern States, coffee, sugar, spices, cacao,** indigo, and cotton.

In the **Andean** regions, a great variety of both tropical and temperate plants, such as wheat and other European grain in Chile; sugar, cocoa, and Peruvian bark in the Equatorial States.

In the great southern plains, **wheat** and **maize.**

The wheat produced in the Argentine Republic is rapidly increasing in quantity, and is largely exported to Europe.

2. **Animal.**—The native wild animals are very numerous, the variety of species very great, and many of the species are found only in South America. The forest trees are alive with **monkeys** and **birds,** such as toucans and macaws, while many large animals range the woods. **Snakes** of all sizes abound. Many kinds of animals live on the great plains, from the wild **horses** and **cattle,** descended from European tame ancestors, to small **burrowing animals.** The birds, too, range from the large running **rhea,** something like the ostrich, roaming over the plains, and the **condor** of the Andes, to the myriads of tiny **humming** birds which live in the forests. The great mountain ranges have their peculiar animals, as the **llama,** which is used as a beast of burden in the high western passes. South America possesses no animal so large as the elephant, giraffe, or rhinoceros, but has some species of the cat-tribe—the **jaguar** and **puma**—that are second only to the lion and tiger for size and ferocity.

The most common **domestic animals** are horses, cattle, sheep, and pigs, all of European stock.

3. **Mineral.**—The chief minerals worked are **silver, gold, copper,** and **nitrates.** Many others are abundant, but are little worked, chiefly because of the difficulty of transport.

POPULATION.—It is difficult to estimate the population, because so many of the people live in a savage or half-savage condition; but the total is supposed to be less than 38,000,000.

A very large proportion are **Indians** and Indian **half-breeds. Spaniards** and **Portuguese** are the most numerous of the Europeans, and there are a good many **English, Dutch,** and **French.** There are many negroes in Brazil and the Northern States generally.

MEANS OF COMMUNICATION.—**Roads** are bad in the plains and amongst the mountains. The **rivers** afford many thousand miles of navigable channels, though many are so shallow that steamers of very light draught propelled by stern wheels are used. **Railways** are being extended, but there are enormous tracts still remote from any railway system.

THE COUNTRIES IN SOUTH AMERICA, WITH THEIR CAPITALS

Country	*Capital*
Brazil	Rio de Janeiro
British Guiana	Georgetown
Dutch Guiana (Surinam)	Paramaribo
French Guiana (Cayenne)	Cayenne
Venezuela	Caracas
Colombia	Bogota
Ecuador	Quito
Peru	Lima
Bolivia	Sucre
Chile	Santiago
Argentine Republic	Buenos Ayres
Uruguay	Monte Video
Paraguay	Asuncion

EXAMINATION PAPERS

A. 1. Name and describe the great plains of South America, stating their position.

2. Draw a sketch-map of South America, inserting the chief mountain ranges and rivers.

3. Describe the climate of South America, comparing it, as far as possible, with that of Africa.

4. Give some account of the wild and domestic animals of South America, showing their distribution, and mentioning any peculiarities.

B. 1. Write an account of the mountain systems of South America.

2. Describe the La Plata and the streams which unite to form it.

3. Describe a voyage from the mouth of the Orinoco to the Galapagos Islands, mentioning the chief capes, openings, islands, and harbours passed on the way, and giving alternative routes round the south of the continent.

4. Name the chief vegetable products which enter into the commerce of South America.

SOUTH AMERICAN STATES

With the exception of Guiana, the States of South America are independent republics. They may be classified, according to their physical peculiarities, as follows:—

1. **Brazil.**—The land of the **Selvas** and **Campos.**

2. **Venezuela and Guiana.**—The country of the **Llanos** and **Northern Mountain System.**

3. **Ecuador, Colombia, Peru, and Bolivia.**—The **Andean** States, each including a part of the **Montaña.**

4. **Chile.**—The **Western Coast Strip.**

5. **Argentine Republic, Paraguay, and Uruguay.**—The States of the **Great Southern Plains.**

Guiana is divided into three colonies, owned by **Britain**, **France**, and **Holland.**

The **Montaña** is the region of thickly wooded hills on the eastern side of the Andes.

Each of the above divisions has its own distinctive climate and productions.

POLITICAL FEATURES.—1. **Government.**—South America contains ten republics, viz.—all the countries mentioned above except Guiana. Each has a President and two Houses of Legislation.

2. **Religion.**—The Spanish origin of a large section of the population accounts for the prevalence of the Roman Catholic religion.

BRAZIL

POSITION AND SIZE.—Brazil may be said, roughly, to form the **Basin of the Amazon,** though the upper waters of the Andean tributaries lie beyond the Brazilian frontier, and the streams which form the La Plata have a considerable course in Southern Brazil.

The **area** is over 3,000,000 sq. miles, or nearly half the continent of South America, and more than three-fourths of the size of Europe.

PHYSICAL FEATURES.—The surface is about equally divided into the **Selvas**, or low forest plains on both sides of the Amazon, and the **Campos**, or tablelands of the east and south. The Campos lie between long ranges of hills, which gradually increase in height towards the interior, and the productions are very different from those of the Selvas. The coast-line is very destitute of good harbours for long distances, especially along the north. The **harbour** of **Rio de Janeiro** is excellent. In addition to the Amazon the **San Francisco**, which flows into the east coast, is an important river.

PRODUCTIONS.—The chief cultivated districts are in the low regions round the coast, and on the Campos which are nearest to the sea. The most valuable **crops** are **coffee, sugar, tobacco, cotton,** and **manioc**, from the root of which tapioca is obtained.

Coffee is much the most important crop.

Of **forest products** the chief are **india-rubber** and **Brazil nuts.**

The minerals of Brazil are valuable, but are little worked. Some **gold** is obtained.

TRADE.—The **foreign commerce** of Brazil and of all the other South American States is almost entirely limited to an exchange of the products of the fields and plantations, forests and mines, for the manufactured goods of Europe and the United States.

The **internal trade** of Brazil is small, owing to the difficulties of communication and the simple needs of the tribes inhabiting the interior.

Imports.—Manufactured textile goods, especially of **cotton**; **iron** goods and machinery.

Exports.—**Coffee**, nearly three quarters of the total, **sugar, tobacco,** and **forest products.**

TOWNS.—All the large towns are on or near the coast, and are mostly seaports.

Rio de Janeiro (780), the capital, is finely situated, and has much trade. **Pernambuco** (190) and **Bahia** (174) are the outlets for a well-cultivated and populous district, producing, and to some extent manufacturing, **cotton.** Other busy ports are **Para** and **Ceara.**

FIG. 121.—SOUTH AMERICA: PHYSICAL AND POLITICAL

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POPULATION.—About 17 millions, consisting of whites of Portuguese descent, Negroes, American-Indians, and half-breeds.

VENEZUELA AND GUIANA

POSITION AND SIZE.—These countries comprise almost all the northern highland region, bordered in Venezuela by the Llanos of the Orinoco and in Guiana by a low coast-strip. **Venezuela** is nearly 600,000 sq. miles in extent, or one-third the area of the Indian Empire. **Guiana** is rather over one-third as large as Venezuela, and is divided into **British, French, and Dutch Colonies.**

British Guiana is somewhat larger than the united area of French and Dutch Guiana.

PHYSICAL FEATURES.—The mountains are steep, and covered with very dense forests. The highest peak is over 8,000 ft.

Many rivers flow from them to the north, especially in Guiana, where the heat and plentiful moisture combine to make the soil very fertile. In Venezuela the Llanos are wide, and become very hard and barren in the dry season. The chief river of Guiana is the **Essequibo.**

PRODUCTS.—The products include the crops of the tropical regions, forest products as in Brazil, and animal products of the cooler grassy tablelands. The **chief** are coffee, sugar, cocoa, spices, and india-rubber.

British Guiana and **Venezuela** also produce gold, the former in increasing and the latter in decreasing amounts.

TRADE.—Exports.—Raw products of plantations, forests, and mines.

Imports.—Manufactured goods and articles of food.

The latter are largely imported into Guiana for consumption by the Negroes and Indian and Chinese coolies on the sugar and other plantations.

TOWNS.—Caracas (80) is the capital of Venezuela, and is situated amongst some hills near the sea. Its port is **La Guayra.**

In British Guiana the capital and chief town is **Georgetown,** on the **Demerara** River. In Dutch Guiana, **Paramaribo,** upon

the **Surinam** River, is the capital; and in French Guiana the capital is **Cayenne.**

POPULATION.—In Venezuela over 2¼ millions, of whom 300,000 are Indians. The whites are mostly of Spanish descent. In Guiana the total population is under 400,000, of whom more than three-fourths are in British territory. A large number of East Indian and Chinese coolies are employed on the plantations in the low hot districts. There are some Arab convicts in French Guiana.

French Guiana is much behind the other colonies in population and value of products.

COLOMBIA, ECUADOR, PERU, AND BOLIVIA

These are all Andean States, as also is Chile, but they differ from the latter in including the hilly forest region which lies immediately to the east of the great mountain system, and is known as the **Montaña.**

This circumstance and the situation of Chile to the south of the tropics cause a marked difference in the climate and productions of Chile compared with the former countries. Chile will therefore be treated separately.

PHYSICAL FEATURES.—In Colombia and Ecuador the Andes consist of two parallel ranges, enclosing a lofty tableland, which has a temperate climate, and is the home of most of the inhabitants. In Peru and Bolivia there are three ranges, with intervening plateaux. The largest tableland is that of **Titicaca,** upon which is the lake of the same name. The eastern portion of Colombia extends into the Llanos of the Orinoco. The eastern parts of Ecuador, Peru, and Bolivia are drained by the Amazon and its feeders. The coast-line is very unbroken, with deep water coming up close to the land, and with very few good harbours.

PRODUCTS.—1. **Cultivated.**—Coffee, sugar, cotton, and tobacco are all important crops.

Forest.—India-rubber (in the Montaña) and cinchona.

A remarkable decline in the export of cinchona, or Peruvian bark, has taken place in recent years through the cultivation of the tree in India, Ceylon, and the East Indies.

2. **Animal.**—**Cattle** are numerous, and hides are exported. **Wool from the alpaca and vicuna is a valuable product.**

3. **Mineral.**—All these countries are rich in minerals, but they are little worked, owing to the extreme badness of the roads and the great difficulty of making railways.

Silver is produced in large quantities, and **gold** in less amounts. The deposits of **guano** and **nitrate of soda** formerly belonging to **Peru** and **Bolivia** have mostly been transferred to the possession of **Chile.**

COMMERCE.—The natural wealth is great, but the exchange of the products of the soil and mines for foreign goods is much hindered by the great elevation of much of the surface and the steepness of the slopes from the coast. Some railways have been constructed, and steamers navigate a few of the rivers, but the total commerce is small in proportion to the extent of these States.

Imports.—Manufactured goods, chiefly from the United Kingdom, United States, Germany, and France.

Exports.—Coffee, sugar, cacao, tobacco, hides, silver, and gold; others are india-rubber, cinchona, and cotton.

SEAPORTS.—In **Colombia, Cartagena** is the most important.

In **Ecuador, Guayaquil** is the chief.

In **Peru, Callao,** the port of Lima, and **Mollendo** have the bulk of the trade.

Bolivia now has no port, but carries on most of her trade through **Arica,** in Peru.

OTHER TOWNS.—**Bogota** (120), the capital of Colombia, is 8,500 ft. above the sea level, and has a lovely climate.

Quito (50), the capital of Ecuador, is similarly situated. Communication with the coast from Quito is very difficult, and the obstacles against making a railway are very great.

Lima (113), the capital of Peru, is an old city of Spanish foundation. It is situated in a volcanic region, and consequently suffers from earthquakes.

La Paz (45) is the largest town in Bolivia, but the present capital is **Sucre.**

CHILE

POSITION AND SIZE.—Chile extends along the western coast of South America for over 2,500 miles, and has a width which in no part reaches 200 miles, and is in some places less than 100 miles. The **area** exceeds 300,000 sq. miles. The eastern boundary is the highest ridge of the Andes. Both sides of the Magellan Strait are Chilian territory.

PHYSICAL FEATURES.—The surface consists almost entirely of ranges of hills projecting westwards from the Andes, with extensive valleys between them. The high Andean peaks include many volcanoes, some of which are active; and the country is extremely subject to earthquakes. The highest mountain is **Aconcagua** (23,000 ft.), the loftiest peak in South America. The rivers are of necessity short and rapid, and very few of them continue to flow throughout the year. The surface can be divided into three portions.

(*a*) The northern part, very dry, and embracing the **Desert of Atacama**. This region is chiefly of value for the abundance of nitrates.

(*b*) The central strip, with a sufficient rainfall, the home of most of the population, and the chief area of cultivation.

(*c*) The southern strip, intersected by fjords and including many islands, largely covered with dense forests.

PRODUCTS.—1. The chief crops are **wheat** and **barley**, **maize**, **wine** and **fruits**, such as oranges, peaches, and apples.

The climate resembles that of Spain, and there is thus a similarity in their products.

2. **Mineral.**—**Nitrate of soda**, **copper**, **silver**, and **coal** are the chief.

3. **Animal.**—Cattle and sheep are largely reared.

COMMERCE.—Owing to the energy of the people, the abundance of mineral products, and the nearness of all parts to the sea, the foreign trade is large.

Imports.—Manufactured goods, especially cottons and woollens, and machinery. Cattle, coal, and refined sugar are also imported.

Exports.—Nitrates, copper and silver, wheat and barley, hides.

The trade is mostly with the United Kingdom, Germany, the United States of America, France, and Peru.

SEAPORTS.—There are many ports, but the two chief are **Valparaiso** (120), the centre of the import trade, and **Iquique** (16), from which the great bulk of the mineral produce is exported.

CAPITAL.—**Santiago** (256) is an inland town to the east of Valparaiso.

POPULATION.—Nearly 3,000,000, or about 10 to a square mile.

There are comparatively few Indians or Negroes, but a large mixture of Europeans and white natives of the other South American States.

The country has enjoyed a much more settled government than most of the other States, and is very prosperous.

ARGENTINE REPUBLIC, PARAGUAY, AND URUGUAY

POSITION AND SIZE.—These three republics occupy the whole of the southern part of South America south of Bolivia and Brazil and east of Chile. The Argentine Republic is next in size to Brazil, being 1,125,000 sq. miles, or five-eighths the area of the Indian Empire; Paraguay is 98,000 sq. miles, and Uruguay 72,000 sq. miles.

PHYSICAL FEATURES.—The great bulk of this region consists of vast plains, sloping from the Andes towards the Atlantic Ocean, and bearing various names. These plains differ widely in appearance and productiveness. In the northern part is a wide stretch of open forest land, known as **The Great Hunting Ground**; in the centre are the grassy **Pampas**, and southward is a **shingly desert**. The chief rivers are the **Parana, Paraguay**, and **Uruguay**, which form the La Plata estuary.

Paraguay and **Uruguay** resemble in their eastern portions the neighbouring **Campos** of Brazil. The coast-line is generally low, and the sea shallow, especially near the great estuary of the La Plata.

PRODUCTS.—The summers are hot, particularly in the northern parts; but the chief products are those of temperate regions.

1. **Vegetable.**—**Wheat, maize,** and **barley** are largely grown in all three States. **Sugar** in the Argentine Republic and Paraguay. **Maté** or Paraguay **tea, manioc,** and **oranges** also in Paraguay.

2. **Animal.**—Cattle, sheep, and horses are very numerous, and form a large portion of the wealth of all these States, but especially of the Argentine Republic and Uruguay.

The **mineral** productions are of slight value.

COMMERCE.—The Argentine Republic is the chief railway region of South America, owing to its great extent of almost

level grassy plains, and the rivers are navigable by vessels of light draught for many hundreds of miles; consequently, carriage of produce is easier than in the other South American countries, and an active commerce is carried on with the other parts of America and with Europe.

Imports.—**Cotton, woollen,** and **iron** manufactured goods; railway and telegraph material, various articles of food and drink, and fuel—viz. coal, coke, and oil.

Exports.—Wool and sheep-skins, hides and horns, live cattle and sheep, beef and mutton (fresh and preserved), and wheat.

The cultivation of wheat is mainly carried on by European settlers, especially Italians.

SEAPORTS.—**Buenos Ayres** (795), on the right bank of the La Plata, is the second largest city in South America, and has grown with great rapidity. It has suffered from the shallowness of the estuary, but by means of dredging, large vessels can now reach the port. It is the chief port and the capital of the Argentine Republic.

Monte Video (175) is the capital and chief port of Uruguay. Its harbour is shallow, and large vessels have to anchor two or three miles from the shore.

Rosario is a port on the navigable part of the Parana.

Asuncion (25) is the chief town in Paraguay.

POPULATION.—**Argentine Republic,** $4\frac{3}{4}$ millions, largely of Spanish descent. The Indians are most numerous in the northern provinces. There are many foreign settlers, principally Italians, French, and Spaniards.

Paraguay, 480,000, of whom more than one-fourth are Indians.

Uruguay, 770,000, of whom nearly three-quarters are native born.

The system of counting the population in the South American States is an imperfect one, and the numbers given must only be taken as an **estimate.**

EXAMINATION PAPERS

A. 1. Name the States of South America, and indicate their position.
2. Describe the surface of Brazil, and name the chief products.
3. What European nations are numerously represented in South America? Indicate where they form important sections of the population.
4. Name five seaports of South America, show their position, and mention any two characteristic exports from each.

B. 1. Show in what ways commerce is hindered or advanced by natural peculiarities in South America, and illustrate each statement by reference to some country.

2. Compare the products of the plains near the mouth of the Orinoco with those near the La Plata.

3. Name four important mineral products, and state the countries in which they are most abundant.

4. Say what you can of Caracas, Cayenne, Pernambuco, Quito, Panama, Callao, Santiago, Lima, La Paz, and Asuncion.

AUSTRALIA

Australia, in many respects, stands alone among the continents of the world.

1. It is the island continent, being 1,800 miles distant from the mainland of Asia, 4,500 miles from Africa, and 8,500 miles from South America.

2. It is the only continent which lies entirely within the Southern Hemisphere. Cape York, the northernmost point, lies in the latitude of 10° S.

3. Unlike Africa and South America, which it most nearly resembles in other ways, its greatest length (2,360 miles) is from east to west.

4. Australia is remarkable for the absence of great rivers, the only one of real importance being the Murray in the south-east.

5. The forms of life indigenous to the continent, both vegetable and animal, are unique.

6. There are no relics of ancient civilisation, while all the other continents abound with ancient buildings and other works dating back to very remote ages.

BOUNDARIES AND SIZE.—The **Pacific Ocean** is to the east; the **Indian Ocean** to the north and west, and the **Southern Ocean** to the south.

The term Southern Ocean is applied to that great mass of water which lies to the south of Australia, Africa, and America, and extends to the Antarctic Circle.

Australia has an **area** of **3 million sq. miles,** or four-fifths that of Europe, the next smallest continent.

COAST-LINE.—In compactness of outline, Australia most resembles Africa and South America. The lack of harbours has been partly responsible for the delay in opening up the interior.

Cape York, the most northerly point, and **Wilson's Pro-**

montory, the most southerly, lie almost on the same meridian. **Cape Howe** and **Cape Leeuwin** form the angles at the south-east and south-west.

The **Gulf of Carpentaria,** on the north, is the largest opening. **Spencer Gulf** and the **Gulf of St. Vincent** are on the same longitude in the south. The latter is protected by **Kangaroo Island.**

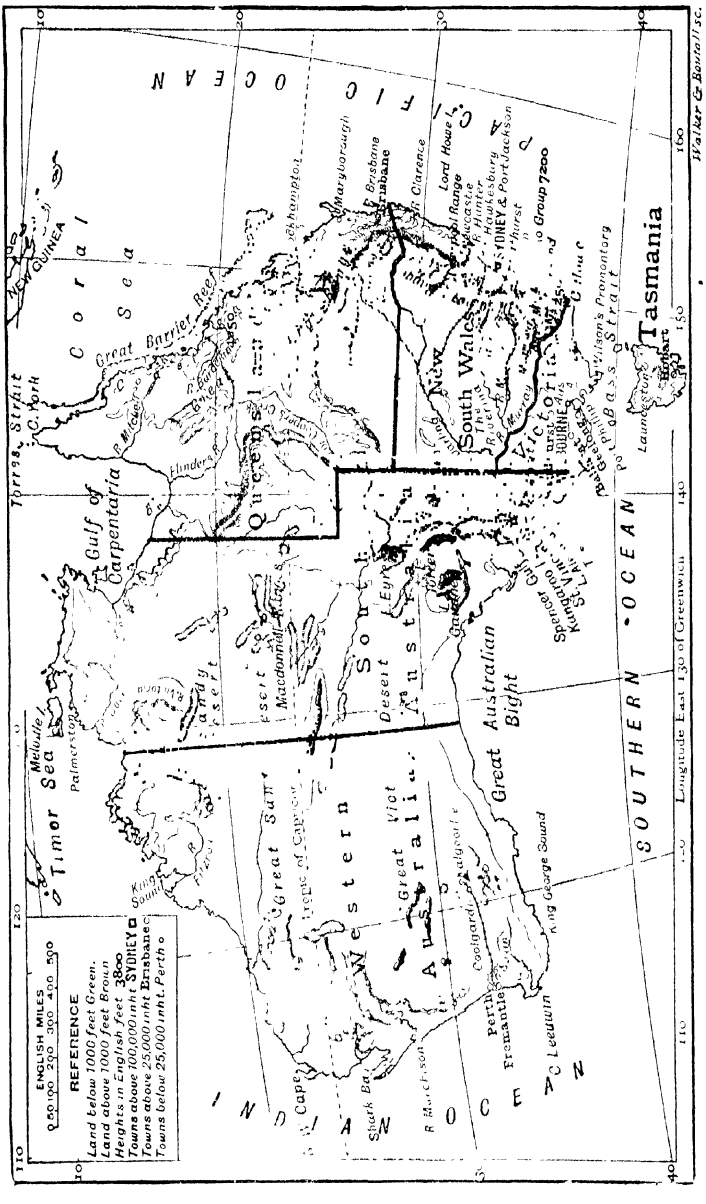
FIG. 122.—AUSTRALIA: RELIEF.

Port Phillip in Victoria and **Port Jackson** in New South Wales are both splendid harbours.

The island of **Tasmania,** in the south, is separated from the mainland by **Bass Strait,** 120 miles wide.

Torres Strait, between Cape York and New Guinea, is 90 miles wide.

FIG. 123—AUSTRALIA: PHYSICAL AND POLITICAL.



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Numerous small islands obstruct this passage, and form part of the coral formation which under the name of the **Great Barrier Reef** extends for over 1,000 miles along the coast of Queensland, forming a natural breakwater and affording a smooth-water passage for ships.

RELIEF.—The relief of the surface of Australia affords a striking contrast to that of Asia. In the former, the mountains lie mostly in the east, whereas in Asia the great mountain mass lies in the centre.

The configuration is the opposite of that of South America. In South America the land rises sharply from the Pacific, slopes down to internal plains, and rises to a plateau in the east. In Australia the land near the Pacific is generally high, slopes inland to a plain, and rises into a large plateau in the west.

The whole basin of the Pacific, except towards the south, is fringed by high lands rising steeply from the sea. The highlands of Australia are a continuation of the ridge which stretches from Siberia through Japan and the Philippine Islands.

MOUNTAINS.—1. The **Dividing Range** extends from Victoria to the north of Queensland and has many different names, of which the chief are the **Australian Alps** in Victoria (rising to 6,500 ft.); the **Kosciusko Group**, having Mt. **Townsend** 7,250 ft., the highest peak in Australia; **Blue** Mts. and **Liverpool** Range in New South Wales.

2. The **Coast Range**, in Queensland.

3. **Flinders** Range, in South Australia, on the east of St. Vincent Gulf.

4. The **Macdonnell** Ranges, in the interior of South Australia.

PLATEAUX.—The greater part of Western and South Australia is occupied by a plateau known by various names, such as the **Great Victoria** Desert and the **Great Sandy** Desert. The chief portion of the eastern plateau is the **Darling Downs**, in the south-east of Queensland.

PLAINS.—A large part of the interior of Queensland, New South Wales, South Australia, and Victoria is occupied by plains.

RIVERS.—Australia has very few large rivers, and all are very variable in depth at different seasons, while those of Asia have mostly a constant source of supply in the melting of the snow and glacier ice of the great highlands.

Also the great rivers of Asia generally radiate from the centre

of the continent, while the only really long Australian river, the **Murray**, flows from a range of mountains which borders the coast.

A good number of comparatively insignificant streams flow from the edge of the plateau and eastern mountain range, and, as in Asia, several rivers of the interior drain into lakes or swamps.

The **Murray** rises in the mountains of the south of New South Wales and flows westward, forming for many miles the boundary between Victoria and New South Wales. It enters South Australia, and after a sharp turn to the south enters the sea through **Lake Alexandrina.**

The chief tributaries enter the Murray on its right bank. The longest are the **Darling**, which has many affluents, and the **Murrumbidgee**, which also receives the **Lachlan.**

The Murray and all its tributaries vary much in depth at different seasons, but small steamers can ply with a fair amount of regularity over some long stretches of the main streams.

East-Coast Rivers.—**Hunter**, **Clarence**, and **Brisbane** are amongst the most important. These streams drain the eastern slopes of the Dividing Range. The Queensland rivers of the east coast are very liable to heavy floods.

North-Coast Rivers.—**Flinders**, **Mitchell**, and **Victoria.** The northern rivers, being in the tropics, are fringed with mangrove swamps. Some of these streams are deep, and can be navigated for as much as 100 miles.

Western Rivers.—**Swan** (180 miles) is the most important.

Rivers of the Interior (Continental Rivers).—**Cooper's Creek**, flowing into Lake Eyre from the mountains of Queensland, is the chief.

LAKES.—**Eyre**, **Torrens**, and **Gairdner**, all in South Australia, are the most important.

CLIMATE AND RAINFALL.—Australia extends into the tropics, and the heat of the northern part is, therefore, tropical in character. However, owing to the elevation of much of the surface of the northern regions, the heat is bearable by Europeans, and even European plants flourish. In the greater part of Australia the heat is that of the warm temperate regions; but it varies much with the nearness of the sea and with the elevation of the surface.

The prevailing winds are from the south-east, and the east

and south-east of the continent therefore get an abundant rainfall. The sea-breezes condensed by the edge of the plateau also bring sufficient rain to the coast of Western Australia. The north-east is in the monsoon region. Much of the interior of the continent is almost rainless, and is covered by a large desert.

FERTILITY OF SOIL.—In the eastern half of Australia a great proportion of the soil is very fertile, and only needs moisture to make it exceedingly productive. Thus, the eastern coast-strip contains alluvial soil; the uplands of Queensland are of rich volcanic formation; and the great plains of New South Wales are of good loam. In the western half a large part of the surface is sandy or stony, and is very barren; but the northern coast is bordered by much very rich low-lying land, and the western part of the tableland produces grass. The country bordering upon the Great Australian Bight is exceedingly dry and barren, but the great southern gulfs are bordered by some good corn land. The amount of absolutely unproductive soil is very much less than it was thought to be by the first explorers. Irrigation by water from the rivers or artesian wells is now being adopted in many parts to make the soil productive.

PRODUCTS.—1. **Vegetable.**—Australia is very deficient in food plants, and the cultivated crops are nearly all of plants imported from Europe.

The **forests** clothe the seaward slopes of the mountains, and consist chiefly of various species of **eucalyptus**, or gum tree. The **spinifex**, a prickly shrub, **kangaroo grass**, and **saltbush** cover great areas, and grow remarkably in dry soils. The saltbush, which survives when the native grasses have died off, is very valuable as food for sheep.

Cultivated Plants.—**Wheat, oats, barley,** &c., **maize, vine, sugar, cotton, tobacco,** and many kinds of **fruits.**

The latitude of Australia enables tropical crops to flourish in the plains of the north, while the plants of temperate regions are successfully cultivated upon the uplands of the same districts. Queensland can produce almost all the crops of the Temperate and Torrid Zones.

2. **Animal.**—The domestic animals of Australia are the **horse, cow, sheep, pig,** &c. The native animals are almost all of the pouched family (**marsupials**), of which very few species exist in the world except in the Australasian islands. The chief are the

kangaroo, of which there are many kinds, the **opossum**, and the **wombat**. The only dangerous wild animal is the **dingo**, or wild dog. That remarkable creature the **duckbill** is a native of Australia.

Birds are numerous. The **emu**, a running bird like the ostrich, is the largest. The beautiful **lyre bird** belongs to Australia. **Parrots** and **cockatoos** are abundant in the woods. **Birds of Paradise** inhabit the forests. Reptiles are very numerous—**alligators** in the northern rivers; **snakes**, lizards, and scorpions in all parts.

Insects—viz. ants, locusts, and bees—are abundant. The white ants are especially destructive.

Fish abound in the rivers and adjoining seas.

3. **Mineral.**—**Gold**, obtained from the soil by washing, and from quartz by crushing, has been the means of advancing the prosperity of Australia both by its actual value and by its attraction of settlers. It is found in all the divisions of Australia, but Victoria has produced the greatest quantity. **Silver, lead, tin, copper,** and **coal** are all worked in large quantities.

PEOPLE.—White settlers of European race, chiefly British, form the vast majority of the people. The native Australians are a black people of very low civilisation and are called Australian Negroes, though they are not true Negroes. They have never shown any desire to become civilised and are rapidly diminishing in numbers. Their chief skill is in the chase, and their remarkable weapon, the **boomerang**, is exceedingly ingenious, being so formed as to return to the thrower after having been discharged at some animal or bird. The **total population** is 3,771,000.

A considerable number of **Chinamen** form part of the population, but they are disliked by the colonists, and their entrance to the Colonies is now hindered by a heavy poll-tax.

Polynesians have been brought from the Pacific Islands to work on the northern plantations.

GOVERNMENT.—The five Continental Colonies and Tasmania are united into one **Federation**, the **Commonwealth of Australia**, and a **Governor-General** is the direct representative of the Crown. In addition, there is in each of the five Australian Colonies a Governor appointed by the British Sovereign, and two Houses of Parliament, either partly or entirely elected by the people. In some of the Colonies the members of Parliament receive pay for their services, but in others they are unpaid.

DISCOVERY.—During the seventeenth century the coasts of Australia were visited by seamen of Portuguese, Spanish, and Dutch race, and the latter named it **New Holland.** No European settlement was made until

after Captain Cook's voyages of 1770 and following years. He explored the eastern coasts, and it was by his recommendation that the English Government selected that coast as a suitable place for a penal settlement. The first settlement was made in 1788, when a number of convicts were sent to Botany Bay.

EXAMINATION PAPERS

A. 1. In what respects does Australia differ from the other continents?
2. Compare the river system of Australia with that of Asia, and account for the most striking differences.
3. Describe the climate and rainfall of Australia, accounting for any peculiarities.
4. Give a brief account of the Great Barrier Reef, the Dividing Range, the Victoria Desert, and the interior river system of the continent.

B. 1. State the position of the chief mountain ranges of Australia, naming them, and indicating any important results of such position.
2. Enumerate the chief races of people inhabiting Australia, and account for the presence of each.
3. Name the most important plants, animals, and minerals of Australia.
4. Give a short account of the discovery of Australia.

VICTORIA

POSITION AND AREA.—Victoria lies south of the Murray, and east of 141° E. long.

The **area** is nearly **88,000 sq. miles** (compare with Haidarabad State), or one thirty-fourth the area of the whole of Australia.

PHYSICAL FEATURES.—Relief.—The **Dividing Range** crosses Victoria from east to west; in the east the range is highest and is known as the **Australian Alps. Plains** stretch away from the range to the Murray on the north and the sea on the south.

RIVERS.—The **Murray** forms the northern boundary of Victoria for nearly 1,000 miles, and tributaries on its left bank are the chief rivers of the colony. The **Yarra-Yarra** flows into Port Phillip, and is of importance from having Melbourne on its banks.

CLIMATE AND RAINFALL.—The summers in Victoria are warm, but seldom excessively so, and the winters are mild, with very little frost or snow upon the plains. A large amount

of snow falls upon the higher mountains, but always melts in summer.

The rainfall on the plains south of the Dividing Range is sufficient; but it is deficient on the plains sloping northward to the Murray.

FERTILITY OF SOIL.—The soil is productive where the rainfall is sufficient, but there is a large district in the west of the colony which is very dry and is covered with scrub. Considerable tracts in the north of the colony have been rendered productive by irrigation.

OCCUPATIONS OF PEOPLE.—Sheep-farming, mining, and agriculture employ the greater part of the population. About one-twentieth of the people are occupied in manufacturing pursuits.

PRODUCTS.—1. Vegetable.—The mildness of the climate favours the growth of cereals—**wheat**, **barley**, and **oats** and **fruits**. The **vine** is grown on the lower hill-slopes, and **wine** is manufactured.

Forest products are also very valuable. Abundance of timber of the numerous species of eucalyptus, and a valuable medicinal oil from the same trees, are produced in the forests that clothe the mountain-slopes.

2. **Animal.**—**Sheep** and **cattle** are reared in large numbers, and hence wool, meat, tallow, hides, &c., form a considerable part of the wealth of the colony.

3. **Mineral.**—**Gold** is produced by quartz-crushing at Sandhurst and neighbourhood. The alluvial gold, which caused the great gold-fever in 1851, was found round about Ballarat, but very little of this kind is produced now.

Numerous other minerals occur in Victoria, but are very little worked at present.

TRADE.—The trade is very large, owing to the great amount of animal and vegetable produce available for export, and to the large demand for manufactured goods from other countries.

MEANS OF COMMUNICATION.—Victoria owns over 3,200 miles of railway, all State property. Small vessels can navigate the Murray and some of its tributaries, and also some of the coast rivers.

The **imports** are **manufactured goods** in great variety, chiefly from Great Britain, **woollen, cotton, iron and steel goods** being

the most important; **raw sugar** from Queensland, **tea** from China and India. The **exports** are **wool, gold, wheat,** and **flour.**

TOWNS.—**Melbourne** (494), on the river Yarra near its confluence with Port Phillip. This is by far the richest and most important city in Victoria, and is the largest in Australia. The city occupies a very extensive site on Port Phillip, and is a flourishing seaport.

Ballarat (46), the largest inland town, stands in the district in which the great gold deposits were discovered and worked so productively in 1851.

Sandhurst is the most important gold-mining town at present. **Geelong** is a port on an inlet of Port Phillip.

POPULATION.—In 1901 about 1,200,000, giving an average of about 13 to a square mile.

Victoria is much more thickly peopled than any of the other Australian colonies.

NEW SOUTH WALES

BOUNDARIES AND AREA.—**New South Wales** lies north of the Murray, and is bounded on the west by 141° E. long., and for most of the distance on the north by 29° S. lat.

The **area, 310,700 sq. miles,** is equal to half that of Persia.

PHYSICAL FEATURES.—**Relief.**—A mountainous plateau occupies the eastern portion. The chief ranges are the **Blue Mountains,** the **Liverpool Range,** and in the south the **Kosciusko Group** with **Mt. Townsend** (7,250 ft.), the highest peak in Australia. A narrow **coast-strip** lies between the mountains and the sea, and in the west are the **Great Plains,** which occupy the bulk of the area, and are scantily watered by feeders of the Murray.

RIVERS.—The **Darling,** formed by a large number of streams, flows south-west to the **Murray.** The **Murrumbidgee,** with its chief feeder the **Lachlan,** also joins the Murray.

Of the East Coast rivers, the longest are the **Hawkesbury** and the **Hunter.** Their mouths, together with **Port Jackson,** form the chief openings on the coast.

CLIMATE AND RAINFALL.—In the low plains the heat of summer is almost tropical, and frost and snow are unknown. On the uplands of the plateau the temperature is that of cool

temperate regions. Hence there is a great variety of crops cultivated in New South Wales. The **rainfall** is abundant on the eastern slopes of the mountains, but diminishes towards the west until it is too slight for successful agriculture to be possible without irrigation.

FERTILITY OF SOIL.—Throughout the colony the soil is naturally good, and varies in productiveness with the **rainfall.** In New South Wales, as in most of the other Australian Colonies, it is becoming the custom to irrigate the dry districts of the interior by water from artesian wells and from the rivers. A very small portion of the colony is as yet cultivated; but large districts produce grasses and saltbush, which furnish food for many millions of sheep.

PRODUCTS.—1. **Vegetable.**—**Wheat** and **maize** are the chief crops, and in addition oats, barley, potatoes, sugar-cane, vine, and oranges are cultivated. Great quantities of cereals are grown and cut green for fodder.

Timber from the extensive forests of the eastern hill and mountain slopes is an important product.

2. **Animal.**—**Sheep,** much the most numerous and important; cattle, horses, and pigs.

3. **Mineral.**—Very rich and varied. **Gold, silver, lead, copper, coal,** and **tin.**

Gold is obtained in many parts by the crushing of quartz.

The **coal** is good and plentiful. The chief coal-field now worked is that near **Newcastle,** on the river Hunter.

Silver is remarkably abundant in the **Barrier Range** of the west

OCCUPATIONS OF PEOPLE.—**Agriculture,** pastoral pursuits, and **mining** occupy the great bulk of the people. **Sheep-farming** is very extensively carried on over the great plains of the west, and **wool** is the most important product and export.

TRADE.—New South Wales exchanges the products of its farms and mines for the manufactured goods of Europe and the produce of tropical climates. The total value of the imports and exports, in proportion to the number of the people, is consequently very large.

This is the case with all new colonies, and is especially so in Australia, where gold is produced and exported.

MEANS OF COMMUNICATION.—The coast region is fairly well supplied with railways; but the interior, except for two or three lines, has to be traversed along roads, which until recently were very bad, but are now being improved and extended. The State owns almost the whole of the **railways** (about 3,000 miles). The tributaries of the **Murray** are navigable by small wool-carrying steamers for a short time after the heavy rains.

Imports.—Manufactured goods of all kinds from Europe, chiefly from the United Kingdom, **tea** from China, and produce, such as **flour, sugar,** and **fruit,** from the neighbouring colonies.

Exports.—Wool, much the most valuable, forming almost two-thirds of the total value of the exports. **Coal, silver, gold, fresh mutton, hides, skins** and **tallow, lead, tin** and **copper.**

TOWNS.—Sydney (488), upon Port Jackson, is the capital and chief trading city of New South Wales. It possesses over one-third of the whole population of the colony. The railway system of New South Wales has its centre in Sydney, which is connected by rail with all the chief towns. The city is splendidly placed and handsomely built.

Broken Hill (24) is a mining town of the West, which has grown up in very recent years, owing to the great discovery of silver in the Barrier Range.

Newcastle, on the Hunter, is the second port, and is the centre of the coal-mining and exporting industry.

Parramatta, on **Parramatta** River, a creek of Port Jackson, has extensive orange gardens.

Goulburn and **Bathurst** are flourishing inland towns in important farming districts.

POPULATION.—About 1,359,000, or nearly 1 to a square mile.

About 5,000 are natives and 1,100 half-castes. The Chinese (about 10,000) are diminishing in number, owing to the poll-tax imposed to prevent their admission to the colony.

HISTORY.—In 1788 the first convict settlement was made at Botany Bay, and three years later the colony was placed under a Governor. At first, New South Wales embraced also Queensland and Victoria; but these were formed into separate colonies about the middle of the nineteenth century. In 1855 the colony received representative government.

QUEENSLAND

POSITION.—Queensland occupies the north-eastern portion of Australia, and embraces almost one-fourth of the total area. A large part of the colony is in the tropics, and many of its vegetable productions are, consequently, of a tropical character.

PHYSICAL FEATURES.—Relief.—The **Dividing Range** broadens out in this colony, and the Eastern Plateau of Australia is here at its widest, hence there are extensive districts suitable for the same crops as are grown further south in New South Wales and Victoria. The **Darling Downs** occupy a district in the south-east.

Rivers.—These are fairly numerous, but are very variable in volume. They are subject to heavy floods during the rainy season, and almost disappear in summer. The **Brisbane** and **Fitzroy** on the east form good harbours.

Coast.—The **Great Barrier Reef,** of coral formation, forms a natural breakwater off the east coast. The **Gulf of Carpentaria,** on the north, is the largest opening on the whole of the Australian coast.

CLIMATE AND RAINFALL.—The situation causes the heat to be great, but it is tempered in large districts by the height of the surface.

A considerable portion of the colony lies within the **monsoon region,** and the rainfall is consequently heavy on the coast ranges, but it diminishes towards the western boundary.

The **soil** is generally fertile and very productive, where well watered. Many districts are now irrigated, either from the rivers or from artesian wells.

PRODUCTS.—1. **Vegetable.**—In the lowlands tropical produce, such as **maize, cotton,** and **sugar,** is grown. In the more elevated regions, **wheat** and other cereals thrive.

2. **Animal.**—**Sheep** and **cattle.**

3. **Mineral.**—**Gold** in large quantities.

TRADE.—As in Victoria, very large in proportion to the population.

MEANS OF COMMUNICATION.—2,800 miles of State-owned railways Roads are bad. Rivers not useful for navigation.

Imports.—**Manufactured goods** and **provisions.**

Exports.—**Gold, wool, sugar, meat, tallow,** and **hides** and **skins** are the most valuable.

TOWNS.—**Brisbane** (50, or, with the suburbs, 100), upon the river **Brisbane,** is the capital and largest town, and is the chief centre of trade in the colony.

Rockhampton (20) is a seaport upon the **Fitzroy** River, and is the outlet for the produce of Central Queensland.

Maryborough (14), on the **Mary** River, is a rising town in a flourishing agricultural district, about 200 miles north of Brisbane.

POPULATION.—503,000 in 1901, or less than 1 per square mile.

SOUTH AUSTRALIA

POSITION.—South Australia is not quite correctly so named, for it includes the whole of the central section of Australia from north to south. It has an **area** of 900,000 sq. miles, or nearly one-third of the total size of Australia.

PHYSICAL FEATURES.—**Relief.**—The great plateau which extends over Western Australia commences in South Australia. From the plateau rise irregular mountain chains, of which the **Macdonnell Ranges** in the centre of the colony are the highest.

Flinders Range, east of Spencer and St. Vincent Gulfs, are only 3,000 ft. high.

The **Great Stony Desert**, north-east of **Lake Eyre**, is exceedingly dry and barren.

Rivers.—Very deficient in number and volume except along the north coast, where the tropical rainfall produces a good number of streams.

The **Murray** has its mouth and lower course in South Australia, and is a navigable stream.

The **inland** rivers, **Cooper's Creek** and **Diamantina**, also end in South Australia, emptying themselves into **Lake Eyre.**

In the north, the chief streams are the **Victoria, Daly**, and **Roper**, all forming harbours at their mouths, and being navigable for considerable distances.

Coast.—The coast is broken by many openings in the north; in many places low and fringed by mango swamps. In the south the coast of **the Bight** is a stretch of sandy shore with a background of high cliffs, running almost unbroken for hundreds of miles.

CLIMATE AND RAINFALL.—Tropical in the north, and temperate in the south. Except on the northern hilly and coast region, the chief feature of the climate is extreme dryness.

SOIL.—A very small fraction of the surface has fertile soil. In the south is a good wheat-growing district, and there are fertile valleys amongst the hills. In the north the heavy rains and great heat make the soil very productive of tropical plants.

PRODUCTS.—1. **Vegetable.**—South Australia is the chief **wheat**-growing district of Australia. Other products are **grapes** and **fruits** in the south, **cotton** and **sugar** in the north.

2. **Animal.**—As in other parts of Australia, **sheep, cattle** and **horses. Camels** are used to a considerable extent in the north.

3. **Mineral.**—**Copper** is the most valuable, the chief mines being situated at **Burra-Burra,** north of Adelaide.

MEANS OF COMMUNICATION.—Nearly 2,000 miles of railway. The Overland Telegraph Line connects Adelaide in the south with Palmerston in the north.

Imports.—**Manufactured goods** from Great Britain, and tropical colonial produce.

Exports.—**Wool, wheat** and **flour,** and **copper ore.**

TOWNS.—**Adelaide** (161, with suburbs), the capital, is on a plain about seven miles to the east of the Gulf of St. Vincent. Its port is **Port Adelaide.**

Palmerston is the chief town in the Northern Territory, and has about **1,200** inhabitants.

POPULATION.—362,000, or about 1 person to 3 sq. miles.

WESTERN AUSTRALIA

Western Australia is a vast region 1,000,000 sq. miles in extent, including the whole of Australia west of 129° E. long., and forming almost exactly one-third of the total area.

It is thus the largest of the Australian Colonies.

PHYSICAL FEATURES.—**Relief.**—The great western **plateau** of the continent occupies almost the whole of Western Australia. A fringe of low land, widest in the north-west, borders the coast. The plateau is bordered by the **Hammersley Mountains** and the **Darling Range.** The plateau is grassy in its

western half, but in the east, where it is away from the influence of the sea-breezes, it is sandy.

Rivers.—The rivers are few in number and very variable in volume. The **Swan River**, 180 miles long, is subject to heavy floods in the wet season. The **Murchison** and **Fitzroy** are of considerable length and are bordered by good grass, but are of no use for navigation.

Coast.—The coast is broken in the north and north-west, but there are few openings on the south and south-west. **King Sound** and **Shark Bay** are large openings, but the smaller openings in the south-west are of greater commercial importance.

RAINFALL.—The south-west receives sufficient rain, brought by ocean winds which counteract the land breezes; and tropical rains are received in the north, but the great bulk of the area of the colony is very dry.

The **soil** of the south-west, of the river valleys, and of much of the coast-strip is fertile, and grassy lands suitable for pasture exist on the west of the plateau, but the eastern half of the colony is sandy and quite unproductive.

PRODUCTS.—1. **Vegetable.**—**Wheat, barley,** and **oats** are the chief crops. **Timber** of excellent quality in the forests which clothe the seaward slopes of the western hills.

2. **Animal.**—**Sheep** in very large numbers.

3. **Mineral.**—**Gold** is now produced in considerable quantities.

TRADE.—**Imports.**—Manufactured goods.

Exports.—Gold, pearls and pearl shell, sandal and other cabinet-making woods, wool and skins.

MEANS OF COMMUNICATION.—Over 1,900 miles of railway are open, including a branch from Perth to the goldfields at Kalgoorlie and Coolgardie, about 360 miles. Roads bad and few in number.

TOWNS.—**Perth** (36), on Swan River, is the capital. **Fremantle** (20) is a calling port for mail steamers.

POPULATION.—The colonists are mostly collected in the south-western corner of the country, where the climate is good, rainfall sufficient, and soil fertile. The total number of the inhabitants in the whole colony is only about **184,000**, or less than the population of Agra.

TASMANIA

Tasmania is a lovely island lying at a distance of 120 miles from the extreme south of Australia, and separated from it by **Bass Strait.** The island is roughly heart-shaped.

PHYSICAL FEATURES.—Tasmania is a continuation of the eastern **highland** of Australia, the connection being seen in the numerous islands which lie between Tasmania and the coast of Victoria. The highest peaks of the island are over 5,000 ft. high.

Very many **rivers** flow in all directions from the highlands to the sea, but they are generally too rapid for navigation. The **Derwent** has Hobart, the capital of the colony upon its right bank.

There are several beautiful **lakes** in the interior of the island. **Great Lake** is the largest.

CLIMATE AND RAINFALL.—The climate is **warm temperate** and is agreeable and healthy. Snow falls upon the uplands, but very little in the valleys. The rainfall, owing to the proximity of the sea, is abundant, and not subject to such variations as in Australia. The soil is mostly very fertile.

PRODUCTS.—1. **Vegetable.**—The grain crops of the temperate zone—**wheat, barley,** &c.—and **fruits** grow freely.

Trees are very abundant, and furnish excellent **hard timber, gums** and **resins.**

2. **Animal.**—Domestic and wild animals as in Australia.

3. **Mineral.**—**Copper** and **tin** are the most extensively worked.

COMMERCE.—Most of the external trade is with England, and is chiefly carried on in British vessels. Home trade is encouraged by the railways that now connect the chief towns, and by coasting and river vessels.

Imports.—Manufactured goods from England, tropical produce, articles of food and drink.

Exports.—**Copper, wool, gold, silver, tin,** and **fruits** are the chief.

TOWNS.—**Hobart** (24, with suburbs), the capital, has an excellent situation upon the river Derwent, which is navigable by the largest vessels.

Launceston (18), upon the Tamar, is the chief port.

GOVERNMENT as in the Australian Colonies.

POPULATION.—172,000, almost entirely British.

EXAMINATION PAPERS

A. 1. State any remarkable facts connected with the commerce of Australia, indicate any disadvantages from which it suffers, and name the chief centres of trade.

2. Give an account of the Great Barrier Reef, Darling Downs, and the West Australian Plateau.

3. Name the colonies in Australia, with their capitals and the situation of the latter.

4. Name the chief products, animal, vegetable, and mineral, of Tasmania; name the exports and chief centres of commerce.

B. 1. Name the chief watersheds of Australia and the chief rivers flowing from them.

2. Say what you can of Geelong, Ballarat, Broken Hill, Goulburn, Rockhampton, and Palmerston.

3. Describe the soil of each colony, stating causes of local peculiarities if possible, and show how natural hindrances to fertility are overcome in some districts.

4. Describe the physical features of Tasmania, drawing a sketch-map to show position of chief mountains, rivers, capes, openings, lakes, and islands.

NEW ZEALAND

GENERAL DESCRIPTION.—New Zealand consists of a group of islands lying in the Pacific Ocean almost at the centre of the hemisphere of water, as the British Isles are in the centre of the hemisphere of land. The two large islands are traversed by mountains, which reach a great height, and present a charming variety of scenery. These islands are largely of volcanic origin, and there is much volcanic energy still displayed, especially in the North Island. The direction of the mountain ranges causes the rivers to be of only moderate length, but they are numerous and useful. The climate, soil, and productions of New Zealand have combined to make the colony a home for numerous healthy and prosperous British settlers. Unlike the other Australasian Colonies, there is in the North Island of New Zealand a large native population, emulating the white settlers in the pursuit of various civilised industries.

POSITION.—New Zealand consists of two large islands, called the **North** and the **South** Islands, and a much smaller one to the

south called **Stewart** Island. The group lies at a distance of over 1,000 miles to the south-east of Australia, and there is no large piece of land for vast distances to the north, east, or south of these islands. The central line of the group points north-east and south-west, and all the coasts are washed by the Pacific Ocean.

Several groups of small islands in the surrounding ocean are included in the colony.

SIZE.—New Zealand extends over about 13° of latitude, and the greatest length is over **1,000 miles.** The total **area** is over **104,000 sq. miles,** of which North Island occupies 44,000 and the South Island 58,000 sq. miles.

COAST-LINE.—The North Island is cross-shaped, and the South Island an irregular oblong. The four points of the cross in the North Island are **C. Maria van Diemen, East Cape, C. Palliser,** and **C. Egmont.** The chief openings are **Hauraki Gulf** and **Hawke Bay** on the east coast.

The coast of the South Island is much more regular. The largest opening is **Tasman Bay,** with **Cape Farewell** to the west.

Cook Strait divides the North from the South Island, and **Foveaux Strait** the South from Stewart Island.

RELIEF.—The islands are largely **volcanic** in origin.

The North Island.—The wide portion is almost filled with mountains and high plateaux, which are bordered by lowlands extending to the coasts. **Mt. Egmont** is more than 8,000 ft. high and is remarkably beautiful.

The **volcanic region** of the North Island is a large district full of the evidences of the activity of subterranean forces. There are active volcanoes discharging lava or mud, and very numerous boiling springs and geysers, whose water possesses many medicinal properties. The district is resorted to by numbers of invalids and is also a great holiday resort.

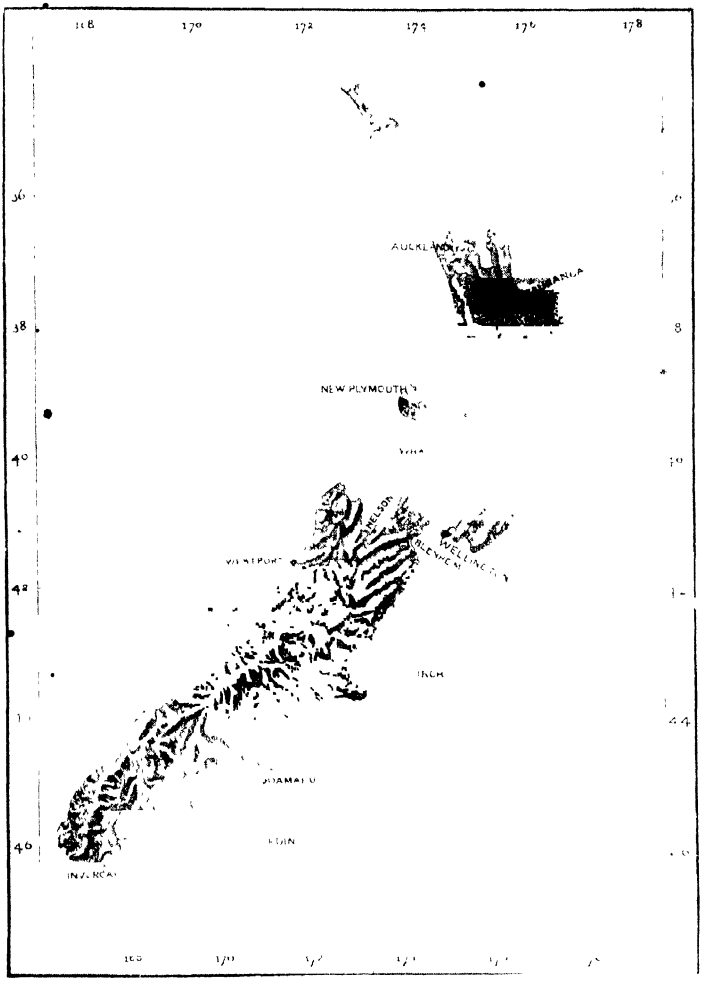
The South Island.—The great mountain ridge lies nearer to the west than to the east coast, forming, in fact, much of the western coast-line. The chief slope is therefore to the east. The **Southern Alps** form the central and highest portion of the range. **Mt. Cook,** 12,000 ft., is the highest peak.

The mountain scenery of the South Island is remarkably grand, and embraces snow-clad peaks, great glaciers, lofty waterfalls, numerous rivers and lakes, and vast forests.

RIVERS.—The **Waikato** is the chief stream in the North Island. The **Clutha**, 170 miles, in the South Island, is the longest river in New Zealand.

From the relief of the country it is impossible for very long rivers to exist in New Zealand.

FIG. 124.—RELIEF MAP OF NEW ZEALAND.



LAKES.—**Taupo,** 200 sq. miles, in the North Island, and **Te Anau,** 132 sq. miles, in the South Island, are the largest lakes.

There are many other lakes, particularly in the South Island, and some are famous for beautiful scenery.

CLIMATE AND RAINFALL.—Although the whole of New Zealand is nearer to the Equator than the southernmost point of the British Isles, there is considerable resemblance in the climate of the two groups.

The vast ocean surrounding New Zealand has the effect of preventing extremes of heat or cold in the lowlands, and also of reducing the difference between the average temperature of the extreme north and south. The highland regions experience very severe winters, with much snow. The rainfall is much heavier in the west than in the east, but is everywhere sufficient for agriculture.

The **soil** is consequently fertile, especially in the river valleys, and there are no barren wastes such as occupy a large portion of Australia.

PRODUCTS.—1. **Vegetable.**—The vegetation is that of the Temperate Zone. The chief crops are **wheat, barley,** and **oats.**

The **forests** produce good **timber** from the various pine trees. **Kauri gum** is dug on the sites of ancient forests in the North Island.

2. **Animal.**—The islands are peculiarly deficient in wild animals. The chief domestic animals are **sheep, cattle, horses,** &c.

Mutton to the value of over two millions of pounds a year is now exported in vessels fitted with cold chambers.

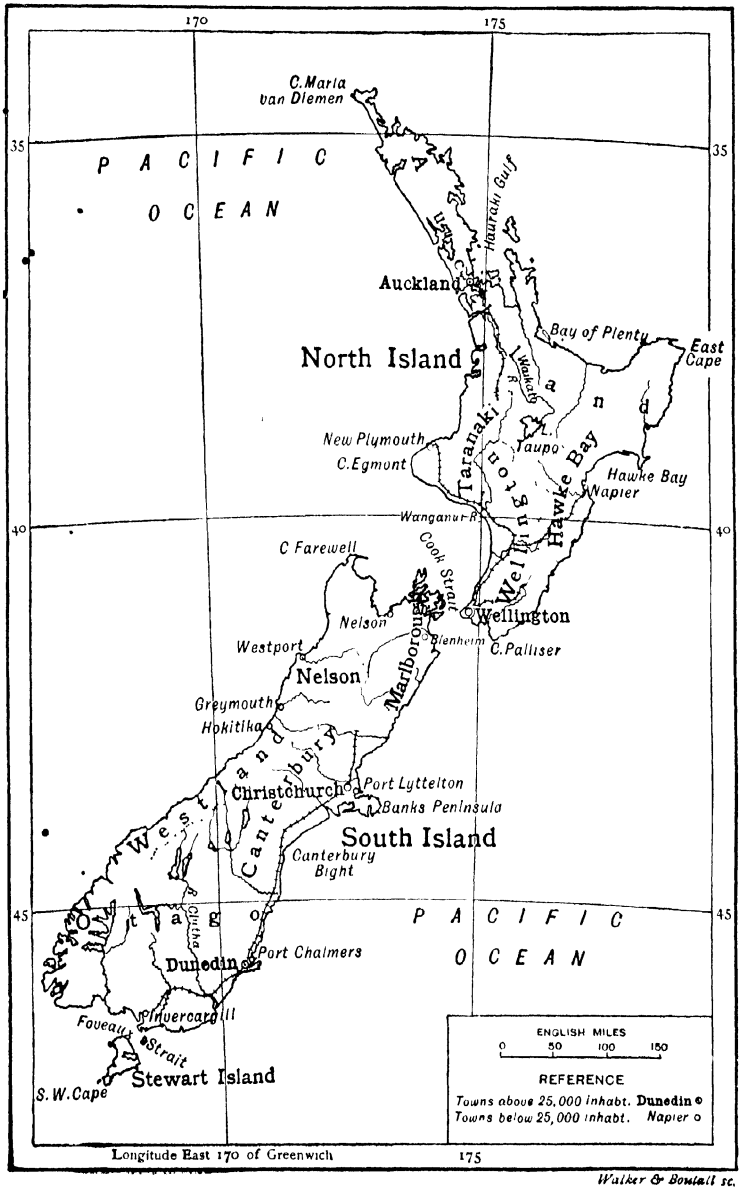
3. **Mineral.**—**Gold** and **coal** are the most important minerals worked.

The **gold** is obtained by quartz-crushing in North Island, and from alluvial deposits in the South Island.

The best **coal** is obtained on the western side of the **South** Island.

MANUFACTURES.—There are many manufacturing works and factories, but there is no staple manufacture, and the colony is mainly dependent upon the United Kingdom for manufactured goods. Wool is made up into strong, useful tweeds, shawls, &c.

FIG. 125.—NEW ZEALAND: PROVINCES.



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Longmans & Co. London & New York

TRADE.—Foreign trade is almost entirely an interchange of vegetable, animal, and mineral produce, for manufactured goods, tropical produce, and articles of luxury.

MEANS OF COMMUNICATION.—The State has constructed and owns the railways, which have a total length of about 2,200 miles. Roads are difficult to make and are not good, especially in the South Island.

SEAPORTS.—The five chief seaports, in order of the value of their imports and exports, are **Port Lyttelton, Dunedin, Wellington, Auckland,** and **Napier.**

Port Lyttelton, on Port Cooper, an opening in Banks Peninsula, is the port of **Christchurch**, and is the outlet for the produce of the large and fertile province of Canterbury.

Dunedin, upon **Otago Harbour**, is the chief port in the southern portion of the South Island.

Wellington is situated upon **Port Nicholson**, which is an extensive and very safe harbour with deep water.

Auckland is situated upon the east side of the narrow isthmus which connects the north-western peninsula with the main portion of the North Island. A short railway connects it with Manakau Harbour, a fine inlet on the west coast.

Napier, upon **Hawke Bay**, is the only important port between Auckland and Wellington.

IMPORTS.—**Woollen, cotton, silk,** and **linen goods; iron** and **steel** goods and **machinery; sugar.**

The great bulk of the imports is from the United Kingdom.

EXPORTS.—**Wool, frozen meat, gold, grain, butter** and **cheese, Kauri gum.**

Three-fourths of the exports are taken by the United Kingdom.

TOWNS.—**Auckland** (67) was until 1865 the capital of the colony and is still the largest town. The necessity for a more central position caused the change of capital.

Christchurch (57) is the most important town in the South Island.

Dunedin (52) is a flourishing town 230 miles south of Christchurch.

Wellington (49), upon Port Nicholson, is the capital of the colony.

GOVERNMENT.—New Zealand resembles the Australian Colonies in having two elected Houses of Parliament and a Governor appointed by the Crown. The title of the **Dominion of New Zealand** was adopted in 1907.

POPULATION.—948,000, or nearly 8 to a square mile. About 43,000 are **Maoris**, as the natives are called. There are also about 2,800 Chinese.

The Maoris are a race much superior to the Australian natives in intelligence. Many of them have adopted European dress, manners, and occupations, but others prefer the condition of their ancestors.

EXAMINATION PAPER

1. State the position, boundaries, length, breadth, and area of New Zealand.
2. Describe the relief of the North and the South Islands, mentioning the chief mountain ranges and peaks, and also any large plains or tablelands.
3. Describe the climate of New Zealand, and show how it affects the character of the vegetation both indigenous and imported.
4. Name two ports in each of the two large islands, stating their position and any facts of interest connected with them.
5. Give some account of the people of New Zealand, with their religion, education, government, and occupations.

ISLANDS OF THE PACIFIC

In the Pacific Ocean, to the east of the Malaysian and Australasian Islands, lie a vast number of islands, most of which closely resemble each other in structure, products, and inhabitants. The greater number of them are situated between the Equator and 20° S. lat., but there are also several groups between the Equator and 10° N. lat., and the northernmost group, the Sandwich Islands, is in 20° N. lat.

MELANESIA.—The islands lying north of Australia, inhabited by Papuans, are grouped under the term **Melanesia**, or 'Islands of the Blacks,' the people being very dark.

The chief of these are **New Guinea**, the numerous islands grouped under the term **Bismarck Archipelago**, **New Caledonia**, **Solomon Islands**, and **New Hebrides**.

GENERAL DESCRIPTION.—The Melanesian Islands are generally mountainous, and are frequently bordered by coral reefs. The climate is hot, though tempered by the ocean, and the products are of a tropical nature. Thus, cotton, sugar, bananas, yams, and coco-nuts will grow freely. The Papuans resemble the East African natives in appearance, and are mostly very fierce in character, practising cannibalism and head-hunting.

Nearly all of these islands are either directly owned or are protected by four European nations—viz. Great Britain, Germany, Holland, and France.

CLIMATE.—Most of the islands of Melanesia and Polynesia lie within the tropics, and therefore have a hot climate; but the heat is pleasantly tempered by the ocean, and varies very little. The rainfall is generally heavy at certain seasons, and the vegetable productions abundant. Except in New Guinea, the climate is mostly healthy for Europeans.

NEW GUINEA.—This great island has an area of about 300,000 square miles, and extends over about 20° of longitude and 10° of latitude. The western portion, comprising almost one-half of the island, belongs to the Dutch, and the remainder is divided between Germany and Great Britain, the British portion being the larger. The natives are numerous, and are in many tribes, which differ considerably in customs and character. European settlers are very few in number, the climate being very unhealthy for them. The British portion is under the control of the Commonwealth of Australia, and the central court is at **Port Moresby.**

The **SOLOMON ISLANDS** are under the joint protection of Great Britain and Germany. The **New Hebrides** are protected by Great Britain and France.

GERMAN ISLANDS.—The **Bismarck Archipelago** has an area of nearly 20,000 sq. miles, and consists of a great number of islands. The chief exports are copra (coco-nut kernels in small pieces) and coco-nut fibre.

FRENCH ISLANDS.—**New Caledonia** and numerous adjacent islands form a French colony. New Caledonia itself is a large island, and is used as a penal settlement for French convicts. The soil is tilled largely by released prisoners, and is very productive.

POLYNESIA.—The innumerable islands of Polynesia are scattered over 40° of latitude and more than 100° of longitude, and are either of volcanic or coral formation.

The **volcanic** islands are mostly mountainous, and are surrounded by reefs of coral, through which there are openings, more or less deep, for vessels. The mountain-slopes in these islands are clothed with dense tropical vegetation, and the soil is

fertile, producing food for man with very little effort on his part. Breadfruit, coco-nuts, and yams are widely spread, and are the food of great numbers of the people.

The **coral** islands are small and low, and vast numbers of them are not yet fit for human habitation. Many of them are true atolls, that is, ring-shaped, with a lagoon in the middle, and frequently a coral reef at some distance surrounding the island. The inhabitants are of Malay stock, similar to the Maoris, and vary very much in disposition, some being gentle and friendly, while others are extremely warlike and suspicious. Of the inhabited islands, many are owned by Great Britain, France, and Spain, and others are either partly or entirely independent.

ISLANDS RULED BY BRITAIN.—Fiji Islands.—This group is the most important of the British possessions in Polynesia. The soil is very fertile, and largely cultivated by Indian coolies working for European planters. The chief products are sugar, coco-nuts, and bananas. The largest island is **Viti Levu,** and on this stands **Suva**, the capital. Britain possesses numerous other groups and detached islands, which are valuable as coaling stations.

ISLANDS RULED BY FRANCE. Society Islands.—These are very lovely islands, with an agreeable climate and friendly people. The chief island is **Tahiti**, or Otaheite, so often visited by exploring and other vessels.

France also claims authority over the **Marquesas Islands**, but the inhabitants are very fierce and warlike.

ISLANDS RULED BY GERMANY.—The **Caroline Islands** were purchased from Spain by Germany in 1899. **Upolu** and **Savaii**, islands in the Samoan Group, belong to Germany.

ISLANDS OWNED BY THE UNITED STATES.—Sandwich Islands and **Samoa.**—The **Sandwich Islands** lie in the north Pacific, and are a very mountainous group, with much good soil and a pleasant climate. Two mountains reach a height of about 14,000 ft.; but the most remarkable mountain is that of **Kilauea,** which is a great crater containing a lake of constantly boiling lava. The chief product of these islands is **sugar**, which is exported to the United States. The capital is **Honolulu,** and the largest island **Hawaii.** The islands once formed a Republic, but have now been annexed by the United States.

Samoa, or the Navigators' Islands, is a group of islands of which **Tutuila** now belongs to the United States, the other islands being owned by Germany.

Tonga, or Friendly Islands, are under the protectorate of Great Britain.

EXAMINATION PAPER

1. Describe the physical peculiarities of the islands of the Pacific.
2. Under what government are New Guinea, the Fiji Islands, New Caledonia, the Sandwich Islands, the Society Islands, and Samoa?
3. Name the races of people inhabiting Melanesia and Polynesia, and show any points of difference in their appearance and character.
4. Describe the climate of the Pacific Islands, and name the chief vegetable products.

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SPOTTISWOODE AND CO. LTD., LONDON
COLCHESTER AND ETON